

Prepared for Michael Couty, Director Angie Stuckenschneider, Prevention Coordinator Missouri Department of Mental Health Division of Alcohol and Drug Abuse

Carol J. Evans, Ph.D. Elizabeth Sale, Ph.D. Ajlina Karamehic, Ph.D. Karen Breejen, B.A. Amanda Whitworth, M.S. Suzanne McCudden, M.A.

Children and Family Mental Health Services Research Missouri Institute of Mental Health University of Missouri-Columbia School of Medicine



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Executive Summary

National trends in adolescent substance use are encouraging. According to the 2005 data from Monitoring the Future, a national survey of 8th, 10th, and 12th graders, cigarettes, alcohol, and drug use decreased or remained stable from 2004-2005. Cigarette smoking decreased significantly among 8th and 12th graders. Alcohol use decreased significantly for all grades and marijuana use remained the same for all grades (NIDA, 2006).

Despite these improvements, many schoolaged youth continue to engage in behaviors that put them at risk for injury, disease, and loss of life. Nationwide, the majority of deaths among those ages 10-24 can be attributed to only four causes: motor vehicle crashes (31%), homicide (15%), suicide (11%), and other unintentional injuries (14%) (Eaton et al., 2006). In 2005, 16% of drivers ages 16-20 who died in automobile accidents had a blood alcohol count of 0.08 g/dl or higher (NHTSA, 2005). Moreover, abuse can result in alcohol family dysfunction, job loss, and overall loss of quality of life. Tobacco use, which for most users begins in adolescence, is the leading preventable cause of death in the United States, and every year causes more than 440,000 deaths (CDC, 2006). Five million people 18 years old and younger will die prematurely of tobacco related disease if the current patterns of smoking continue (CDC, 2006).

Every even numbered year since 2000, the Missouri Department of Mental Health (DMH) has conducted the Missouri Student Survey (MSS) to monitor the risk behaviors of adolescent youth. The 2000 MSS, evaluated by Research Triangle Institute, was part of a SAMHSA grant. Since then the MDMH has contracted with the Missouri Institute of Mental Health (MIMH) to analyze the survey findings. In 2004, the Missouri Department of Elementary and Secondary Education (DESE), which in previous years conducted its own survey, joined with the DMH to implement the survey. This report gives the results of the 2006 joint Missouri Student Survey showing trends in health-related behaviors students in the state. The following executive summary highlights this year's key findings.

Study Sample

The 2006 MSS final sample size includes 68,807 middle/junior and high school aged youth. Participating school districts were required to survey 9th graders and were additionally requested to survey two more grades, of which one was an even number grade. Some school districts opted not to participate. Approximately 32% of the final sample was 9th graders. This was the second year that a web-based survey was used; Spring 2004 was the first year that online surveying was conducted. The instrument

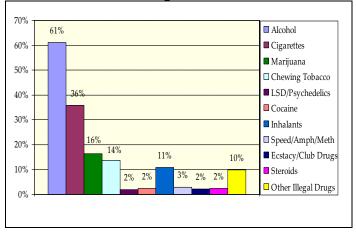
remained unchanged in terms of items from 2004 to 2006 and so when useful, comparisons with the 2004 data are made throughout this report.

Substance Use

Lifetime Use

- As was the case in 2004, alcohol was the substance used most often by youth, followed by cigarettes and marijuana.
- Sixty-one percent reported having at least one or more drinks of alcohol at some time in their life, and almost 54% report doing so on one or more days in their lifetime. Thirty six percent reported having ever smoked cigarette, whereas about one-sixth (16%) of youth reported using marijuana in their lifetime. Lifetime use of all other substances, including LSD, crack, inhalants, meth, club drugs and other illegal drugs was relatively low when a large study sample such as this one is considered. See Figure 1 for the percentage of youth indicating lifetime use of drugs by drug type.

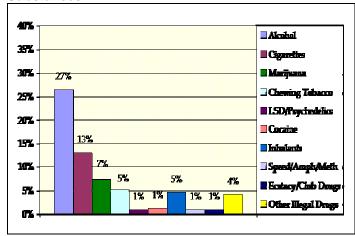
Figure 1. Percentage of Youth Indicating Lifetime Use of Drugs



30-Day Use

• Consistent with the trend in 2004 and reported lifetime use, youth reported the highest 30-day use of **alcohol**, followed by **cigarettes** and then **marijuana** (see Figure 2).

Figure 2. Percentage of 30-Day Use of All Substances



<u>Alcohol.</u> Almost 27% (down from 30% in 2004) of all youth reported using alcohol in the past 30 days. The percentage of youth who have used alcohol one or more times in the past 30 days increased by grade. Forty-three percent of 11th graders and 50% of 12th graders reported drinking alcohol one or more times in the past 30 days.

- Almost twelve percent (11.8%) of all students indicated they binge drank (i.e., five or more drinks in a row within the past two weeks). Of these, 4.8% did so once, 2.8% twice, 2.5% 3-5 times, 1% 6-9 times and almost 1% 10 or more times.
- Binge drinking was higher among older youth. Around fourteen percent (14.1%) of all 9th graders, 19.5% of 10th graders, 23.2% of 11th graders and 29.9% of 12th

graders reported drinking five or more drinks in a row within the past two weeks. The majority of these indicated doing so once, twice or 3-5 times in the last 30 days.

- Twenty-five percent of all 12th grade females reported binge drinking, compared to an even higher percentage (35.6%) of all 12th grade males.
- Comparisons with the 2005 Monitoring the Future Study (MTF) results suggest that 30-day alcohol use among 8th, 10th, and 12th graders in Missouri is still somewhat higher than the national average.
- Comparisons with the 2005 National Survey on Drug Use and Health (NSDUH) data also suggest that 30-day alcohol use among 12-17 year old Missouri youth is higher than the national average.
- Patterns of drinking suggest that most youth, who do drink, do not do so on a daily basis. Only about 0.5% of youth across all grade levels reported drinking alcohol on all 30 days in the past month. Of those who do drink, the majority report drinking 1 or 2 days out of the month.
- Twenty-two percent of youth surveyed indicated they rode in a car or other vehicle driven by someone who had been drinking alcohol, within the past 30 days. Twelve percent of these reported riding with someone who had been drinking more than once.

• Almost six percent (5.6%) of youth reported driving an automobile while drinking within the past 30 days.

<u>Cigarettes.</u> As in 2004, cigarettes were the second most prevalent drug of choice, with almost 13% of the sample reporting that they had smoked in the past 30 days (versus 15% in 2004).

- Patterns of smoking suggest that a larger percentage of youth who smoke versus drink alcohol do so on all 30 days (2.8%).
- Comparisons with the 2005 MTF suggest that the number of 8th, 10th and 12th grade youth who reported smoking in the past 30 days is higher in Missouri than it is nationally.
- Comparisons with the 2005 NSDUH data show slightly higher (2%) 30 day cigarette use among 12-17 year.

Age of Initiation

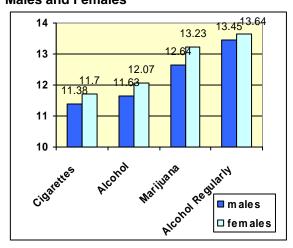
For this analysis, only 15 year olds were selected in order to be able to compare the current sample to the one reported on in 2004, as well as to compare to the earlier reported 2003 NSDUH data which surveyed 15 year olds only.

- Trends in age of initiation in general remain quite similar to those reported in the 2004 MSS.
- Youth reported beginning to use cigarettes at the earliest age, followed by alcohol (more than a sip), marijuana, and regular alcohol use.

• Cigarette use began at an average age of 11.56 (versus 11.48 in 2004), followed by alcohol (more than a sip) at the average age of 11.88, (compared to 12.17 in 2004), marijuana use on average began at 12.97 (versus 13.14 in 2004) and regular alcohol use at the average age of 13.56 (see Figure 3).

The average age of initiation for males was higher than the average for females across all substances.

Figure 3. Average Age of Initiation for Substance Use in Missouri: 15-Year Old Males and Females

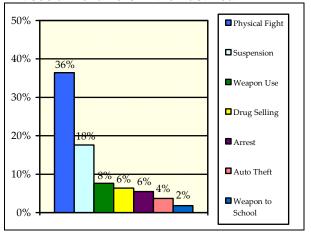


Antisocial Behaviors

- Antisocial behavior trends remained relatively unchanged from 2004 to 2006.
- The most frequent antisocial behavior reported was physical fighting (36.4%), followed by suspension from school, (17.6%) and weapon use (7.6%).
- The least reported antisocial behavior reported was taking a weapon to school (1.8%).

 Antisocial behaviors, especially physical fights, were higher among males than females.

Figure 4. Percentage of Youth Reporting Antisocial Behaviors in the Past Year



Suicide

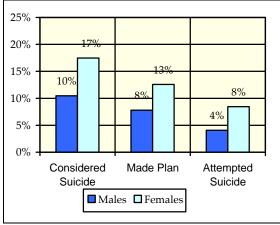
While the number of suicide-related behaviors and thoughts decreased slightly from 2004 to 2006 among the youth sampled, the numbers still remain somewhat high.

- 14.3% (versus 16% in 2004) said they had seriously considered attempting suicide in the past year.
- 10.4% (versus 12% in 2004) said they had made a plan to attempt suicide.
- 6.5% (versus 7% in 2004) said they had attempted suicide in the past 12 months.
- The largest percentage (36.3%) of youth who had considered suicide in the past 12 months were in the 9th grade. Accordingly, more 9th graders than any other grade reported making suicide plans in the last 12 months and actually attempting it in the last 12 months.

Females were much more likely to have suicidal thoughts than males (17.5% versus 10.5%). The same is true of making plans and attempting suicide in the last 12 months (see Figure 5).

Figure 5. Percentage of Students with

Suicidal Thoughts by Gender



Youth living in homes with a high degree of family conflict were more likely to have attempted suicide than youth in homes with less conflict.

Individual and Peer Risk and **Protective Factors**

The MSS explored seven individual and peer risk and protective factors shown to be linked to substance use.

Trends observed are consistent in general with the 2004 data.

Antisocial Attitudes. The majority of youth felt it was wrong or very wrong to engage in antisocial behaviors, such as stealing, skipping school, and picking fights. Males were more tolerant of antisocial behaviors than females.

Rebelliousness. Rebellious attitudes were higher among older youth, among youth whose parents were less educated, and among males. Approval of cheating increased with grade: the percentage of youth who approved of cheating went from a little more than 10% of 6th graders to around 44.3% of 12th graders.

Drug Use Attitudes. Approval of drugs increased by age and grade, was higher among males than females, and higher in metropolitan areas than rural areas.

Perceived Risk of Drug Use. As in 2004, students perceived alcohol to be least dangerous of all legal and illegal drugs, followed by cigarettes, then marijuana. The majority of youth perceived regular use of all of the illegal drugs to be very harmful. Females and younger youth reported substance use to be more harmful than their counterparts.

Peer Rewards for Antisocial Involvement.

When asked about their perceptions of Peer Rewards for Antisocial Involvement, 62.9% of youth felt that there was no chance or very little chance that they would be seen as cool if they smoked cigarettes. This is compared to 52.5% who did not think they would be cool if they started drinking regularly, 66.4% who did not think they would be cool if they smoked marijuana, and 79.2% who thought they would not be cool if they carried a gun. Thus, as in 2004, alcohol use was seen as more "cool" than use of cigarettes, marijuana or carrying a gun.

Family Risk and Protective Factors

Six risk factors and two protective factors measured family attitudes and behaviors related to adolescent substance abuse and other related behaviors.

- The trends for family risk and protective factors remain almost identical to those found in 2004.
- Family factors were weaker among high-school students than middle/junior high students. High school youth perceived their parents to offer less supervision than middle/junior high school youth, their parents were more accepting of substance use, and parents offered fewer opportunities and rewards for involvement.
- Generally, youth in rural areas perceived their families to be better managed, less antisocial, to have less family conflict, less of a history of antisocial behaviors, to have more opportunities for parental involvement and more reward for parental involvement than urban youth.
- Females tended to report more positive family factors than males.

School Risk and Protective Factors

School-related risk and protective factors included academic performance, absenteeism, school commitment, opportunities for school involvement, and rewards for school involvement.

• The trends observed in this sample were similar to those observed in the 2004 MSS sample.

<u>Academic Performance.</u> Most youth reported receiving mostly "As" or "Bs". Females reported having more "As" than did males.

- Youth who reported fighting were more likely to have lower grades.
- Youth who used cigarettes or marijuana within the past 30 days had lower grades than non-users. Fifteen percent of cigarette users and 15.5% of marijuana users reported average grades of D's or F's. Less than 20% of cigarette and marijuana users reported average grades of mostly A's. In comparison, only 7.6% of alcohol users reported average grades of D's or F's and 34.1% reported average grades of A's.

Absenteeism. Almost half (46% versus 42.8% in 2004) of youth reported missing one or more days due to illness. 14.2% reportedly missed one or more days due to skipping or cutting school (versus 17.1% in 2004) and 41.5% missed one or more days of school for other reasons. Females were more likely to miss school due to illness than males, but they were equally likely to skip or cut school.

School Commitment. Youth who were more committed to school were less likely to use alcohol or marijuana. Females were more committed to school than males. School commitment declined from 6th to 10th grade and then remained stable.

<u>Opportunities for School Involvement</u> and <u>Rewards for School Involvement</u>. Opportunities and Rewards for School Involvement were fewer among males, youth in metropolitan areas, and high-school-age youth.

Community Risk and Protective Factors

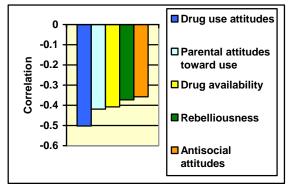
Five scales measure community risk and protective factors, including the extent of the students' attachment to their neighborhood, the disorganization of the community, drug use norms and laws, and drug availability.

- Generally, rural areas scored more positively on community factors than metropolitan areas. Drugs were less available, drug use norms and laws were more stringent, neighborhoods were less disorganized, and the youth were more attached to their neighborhoods.
- There were also more opportunities and rewards for community involvement in rural areas.
- Cigarettes and alcohol were perceived to be equally easy/hard to obtain, followed marijuana and then cocaine, LSD and methamphetamines.
- In general, older youth perceived drugs to be more available than younger youth.
- Youth in metropolitan areas felt there were fewer opportunities for community involvement than rural youth.

Relationship of Risk and Protective Factors to Substance Use

All of the risk and protective factors measured have been demonstrated to be related to adolescent substance use. For this study, we examined which of these factors had the <u>strongest</u> relationships. An analysis of alcohol use was performed since this was the most commonly used drug.

Figure 6. Relationships of Risk and Protective Factors to 30-day Alcohol Use: Five Strongest Factors



- <u>Drug Use Attitudes</u> were most strongly related to alcohol use. Those youth who disapproved of use were more likely not to drink than those who approved of use.
- <u>Perceived availability of drugs</u> was related to alcohol use. If youth thought that alcohol was difficult to obtain, they were less likely to drink.
- <u>Parents who disapproved of their</u> <u>children's use</u> were more likely to have children who did not use themselves.

- <u>Rebellious</u> youth were more likely to drink, as were those with antisocial attitudes.
- These relationships also applied for 30day cigarette use, binge drinking, and marijuana use. All substance use is strongly related to individual, family factors (attitudes), and community factors (perceived availability).

Relationships of Risk and Protective Factors to Suicide

Of the variables measured, family factors were most closely related to suicide. Opportunities for parental involvement, family conflict, and rewards for parental involvement, were all related to suicidal thinking. Drug use attitudes were most strongly related to suicidal thoughts in the last 12 months. Youth who were more accepting of drug use were more likely to have considered committing suicide in the past 12 months.

Conclusions and Policy Implications

Analysis of the 2006 Missouri Student Survey reveals a variety of policy considerations related to adolescent substance use and related factors.

 Considering the prevalence of alcohol use among adolescents, policy makers and prevention practitioners should continue to focus on preventing and reducing alcohol use. Alcohol is a problem substance in the home, is available to youth, is not perceived to be as harmful as marijuana or other illegal

- drugs, and is more accepted in the home and community.
- Parental attitudes are strongly related to adolescent substance use. Prevention programming should focus on family education and skills-building as a means of affecting substance use patterns in youth. Parents should be informed of their influence and given tools to better communicate with their children.
- Policies that focus on reducing cigarette and alcohol availability in the home and the community and restricting youth access to alcohol (parental monitoring of adolescent alcohol use, for example) are recommended.
- Students who are connected to school, feel their teachers care about them, and who do well in school are less likely to use. Because males tend to use more than females and be less connected to school, schools should be particularly attuned to the needs of males and focus on strengthening their connectedness to school.
- Schools should tailor prevention programming to whether the school is located in a rural or metropolitan environment.
- Families and schools should be more cognizant of the potential for suicide among Missouri's youth, particularly among females.
- Police should improve their ability to enforce existing cigarette and alcohol laws.

Overview

National trends in adolescent substance use are encouraging. According to the 2005 data from Monitoring the Future, a national survey of 8th, 10th, and 12th graders, cigarettes, alcohol, and drug use decreased or remained stable from 2004-2005. Cigarette smoking decreased significantly among 8th and 12th graders. Alcohol use decreased significantly for all grades and marijuana use remained the same for all grades (NIDA, 2006).

Despite these improvements, many schoolaged youth continue to engage in behaviors that put them at risk for injury, disease, and loss of life. Nationwide, the majority of deaths among those ages 10-24 can be attributed to only four causes: motor vehicle crashes (31%), homicide (15%), suicide (11%), and other unintentional injuries (14%) (Eaton et al., 2006). In 2005, 16% of drivers ages 16-20 who died in automobile accidents had a blood alcohol count of 0.08 g/dl or higher (NHTSA, 2005). Moreover, alcohol abuse can result in family dysfunction, job loss, and overall loss of quality of life. Tobacco use, which for most users begins in adolescence, is the leading preventable cause of death in the United States, and every year causes more than 440,000 deaths (CDC, 2006). Five million people 18 years old and younger will die prematurely of tobacco related disease if the

current patterns of smoking continue (CDC, 2006).

Every even numbered year since 2000, the Missouri Department of Mental Health (DMH) has conducted the Missouri Student Survey (MSS) to monitor the risk behaviors of adolescent youth. The 2000 MSS, evaluated by Research Triangle Institute, was part of a SAMHSA grant. Since then the MDMH has contracted with the Missouri Institute of Mental Health (MIMH) to analyze the survey findings. In 2004, the Missouri Department of Elementary and Secondary Education (DESE), which in previous years conducted its own survey, joined with the DMH to implement the survey. This report gives the results of the 2006 joint Missouri Student Survey showing trends in health-related behaviors students in the state. The following executive summary highlights this year's key findings.

Method

Sampling Method

The MSS was designed in 2004 to be administered in a web-based format to all 9th grade students across all 524 Missouri public school districts. School districts were asked to survey two additional even numbered grades. While all districts were asked, many either did not participate or

surveyed a small number of youth. An instrument created jointly by the Missouri Departments of Elementary and Secondary Education and Mental Health with the help of MIMH was used by SmartTrack, a webbased survey administration service to develop the automated assessment. MSS data was collected via the internet in Spring 2006 using the same method employed in 2004. The data were then analyzed by faculty and staff at MIMH.

Consent and Confidentiality

Students' parents were informed of the voluntary nature of the survey and gave their consent for their child to participate prior to survey administration. Authorized personnel at each participating school initialized the survey to ensure that only eligible students had access. After completion of each individual survey, student responses were submitted to a database. The survey procedures used were designed to protect the anonymity of the participating students.

This method of data administration represents a significant change from the initial 2002 MSS administration, when a sample of school districts was selected to participate in the MSS. Given the change in the sampling procedure, efforts to compare the 2002 data to 2004 and 2006 should be done cautiously.

Instrument

The MSS is a 116-item instrument that explores student characteristics, drug and alcohol use, and participation in antisocial behavior. The survey uses the framework designed by Hawkins, Catalano, and Miller (1992) to assess risk and protective factors concerning the students' individual and

peer, family, school, and community perceptions, indicative of drug use and antisocial behavior.

Drug and alcohol use were assessed by asking lifetime use ("have you ever used..."), past 30-day use (measured in days and times), and for some drugs, use on school property within the past 30-days. Additional questions assessed the number of cigarettes smoked per day as well as binge drinking, defined here as drinking five or more alcoholic drinks in a row within the past two weeks.

There were no changes to the instrument from 2004 to 2006.

Cleaning Procedures

To ensure validity of the data, a thorough data cleaning process was conducted which include review of consistency of response patterns, respondent fatigue, and respondent honesty.

Honesty was assessed both through the use of a "fake drug" and by asking the youth how honestly they answered the questions. Two "fake drug questions" were included that explored lifetime and 30-day use. Any student who responded that they had used "derbisol" (fake drug) either in their lifetime or in the past 30 days was excluded from the remainder of the analysis. In addition to these questions, students were asked to indicate the degree to which they were honest when completing the survey on a five-point scale from "I was very honest" to "I was not honest at all." Participants who answered they were "very honest" or "honest pretty much of the time" were kept in the sample. Those who answered they were honest "once in a

while" or "not honest at all" were eliminated from the sample.

Responses for students who inconsistently answered the drug use questions were recoded and remained in the analyses. Responses were recoded toward the more specific response. For example, the response to the lifetime use question was recoded from "no" to "yes" if a student indicated that he smoked cigarettes within the past 30-days, but reported that he had never smoked in their lifetime.

A total of 3,512 (4.85%) students were deleted after all validity checks were completed. The number of responses varies across each of the questions. For most

responses, sample size ranged between 66,000 and 68,807. An analysis of non-response showed that the lack of response was random.

Comparing the Current Survey to Prior Administrations

There were no changes to the instrument from 2004 to 2006. Because, however, the 2002 survey used a pencil-paper format and was somewhat different, comparisons of 2002 to 2004 and 2006 data should be made with caution.

Characteristics of the Sample

Survey Participants

More youth participated in the 2006 MSS than they did in 2004. Of the almost 500,000 Missouri public school students in grades 6 through 12, 14% took part in the Missouri Student Survey (MSS). The majority of participants were in the 9th grade, followed by 6th and 8th grade. This is because as in 2004, most districts chose to collect the requested additional data from the 6th and 8th grades.

Data cleaning procedures resulted in a sample loss of approximately 3,512 surveys because many students did not complete the survey, reported inaccurate or inconsistent information, or indicated they were not honest in completing the survey (see Methods section, above, for additional information). The final sample size for most questions was approximately 68,807.

Grade in School

The distribution of the grade had a similar pattern to the 2004 survey. The majority of participants were in the 9th grade (31.6%; 21,751 students). The 6th (11,410) and 8th (13,579) grades represented an additional 36.3 % of the sample. The remaining 32.1% of the sample were in represented the 7th, 10th, 11th, and 12th grades. 0.6% of the sample

failed to indicate their grade level. The average age of the participants was 14.15 years of age (students in the 9th grade are generally between the ages of 14 and 15 years). The average age of the 2005 sample was about the same (14.25).

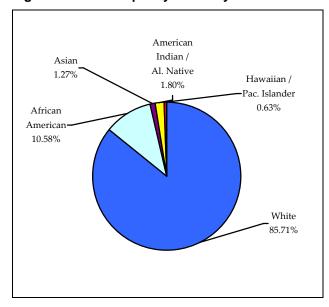
Gender

The percentage of female respondents in the survey was 54.3% (versus 54.8% in 2004), higher than the overall gender composition of the public school population (48.7%).

Race/Ethnicity

The MSS sample was 85.5% White, 10.4% African American, 1.9% American Indian/Alaska Native, 1.5% Asian and 0.7% Hawaiian/Pacific Islander. 5.4% of youth identified themselves as Hispanic/Latino. As in 2004, the racial/ethnic composition of the MSS sample had a larger percentage of Whites and Latinos and fewer African-Americans than in the overall population.

Figure 7. MSS Sample by Ethnicity



English was reported to be the primary language spoken at home (97.4%) by the majority of the participants, followed by "other" (1.4%) and Spanish (1.2%).

Parent Educational Level

According to youth response, there was no difference in the percentage of mothers versus the percentage of fathers who had less than a high school education. About 3% more fathers, however, had graduated from high school than did mothers. In contrast, about 7.5% more mothers had graduated from college than did fathers (see Table 1).

Table 1. Parent Education

Education	Mother	Father
<high graduate<="" school="" th=""><th>9.4%</th><th>9.8%</th></high>	9.4%	9.8%
High school graduate	23.6%	26.1%
Some school	19.4%	16.2%
College graduate	35.8%	28.3%

Geographic Location

The United States Office of Management and Budget (OMB) has defined Core Based Statistical Areas (CBSAs) into metropolitan or micropolitan geographic locations. Each metropolitan statistical area must have at least one urbanized area of 50,000 or more inhabitants. Each micropolitan statistical area must have at least one urban cluster of at least 10,000, but have a population less than 50,000. Each area consists of counties containing the core urban area, as well as any adjacent counties that are highly integrated with the urban core in terms of social and economic integration.

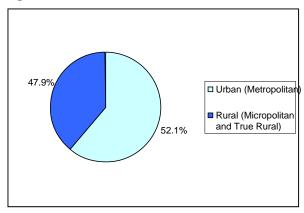
The OMB does not identify or classify entire counties as urban or rural. This report uses metropolitan as the term to classify students residing in counties classified within a metropolitan statistical area. Students residing in counties classified as either micropolitan or non-metropolitan/non-micropolitan are considered to be in rural areas.

When all of these categories are collapsed to create larger units, 52.1% of youth participating in the MSS were in metropolitan and 47.9% in rural areas (see Figure 9).

The geographic location distribution remains rather unchanged from 2004. The largest percentage of students lived in metropolitan areas (St. Louis, Kansas City, Columbia, Jefferson City, Joplin, St. Joseph, Springfield), followed by metropolitan, and non-micropolitan areas. The remainder lived in micropolitan areas (Branson, Cape Girardeau, Farmington, Fort Leonard Wood, Hannibal, Kennett,

Kirksville, Lebanon, Marshall, Maryville, Mexico, and Moberly).

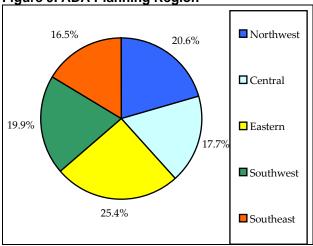
Figure 8. Urban/Rural Classification



In addition, youth surveyed represented all of the Alcohol and Drug Planning regions. ADA's Eastern region had the highest representation (25.4%) of youth responding to the MSS, followed by the Northwest

region. In 2004, it was the Northwest region that had the highest representation.

Figure 9. ADA Planning Region



Cigarette, Alcohol, Marijuana and Other Drug Use Patterns

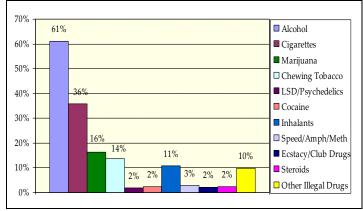
One of the primary purposes of the MSS is to learn more about the alcohol and other drug use patterns of Missouri's students. Students were asked a series of questions about drug use over their lifetime and in the past 30 days. They were also asked at what age they started using various substances.

Lifetime Substance Use

Students were asked to indicate if they had ever (in their lifetime) used cigarettes, alcohol, marijuana and other drugs.

• The drug the greatest percentage of youth reported ever having used in their lifetime was alcohol with 61.1% of youth admitting to having done so. Cigarettes were used by 35.9% of the youth surveyed. Marijuana was used by 16.2% of the youth surveyed. Over 10% of youth reported having used chewing tobacco and inhalants. Less than 10% of those surveyed reported using any of the other drugs in their lifetime.

Figure 10. Percentage of Youth Indicating Lifetime Use of Drugs



Gender Differences

- A greater percentage of females than males reported using cigarettes, alcohol, inhalants, or methamphetamine in their lifetime.
- A greater percentage of males than females reported using chewing tobacco, marijuana, or psychedelics (e.g., LSD) in their lifetime.
- There was no difference in the percentage of males and females who reported the use of cocaine, club drugs (e.g., ecstasy), non-prescription steroids, other illegal drugs, or using a needle to administer illegal drugs.

Racial/Ethnic Differences

- A smaller percentage of African-American youth and Latinos than Whites and youth of "other" race/ethnicities reported the use of chewing tobacco in their lifetime.
- African-American youth reported more cigarette use, but less cocaine, methamphetamine, or non-prescription steroids than youth of any other race/ethnicity.
- White youth reported less marijuana and other illegal drug use than youth of any other race/ethnicity.
- There was no difference in the percentage of lifetime users of club drugs based on race/ethnicity.

Age Differences

- The percentage of youth who reported the use of cigarettes, alcohol, marijuana, psychedelics, inhalants, club drugs, and other illegal drugs increased steadily from the 6th through the 12th grades.
- There was no variation by grade in the percentage of youth who reported the use of chewing tobacco, cocaine, methamphetamine, non-prescription steroids, or the use of a needle to administer illegal drugs in their lifetime.

Regional Differences

 Youth in Southeastern Missouri reported more lifetime use of chewing tobacco, cigarettes, and inhalants than youth in any other region.

- There were no regional differences for lifetime use of psychedelics, cocaine, methamphetamine, club drugs, nonprescription steroids, or the use of needles to administer illegal drugs.
- A greater percentage of youth in rural areas reported using alcohol, marijuana, and other illegal drugs in their lifetime than youth in metropolitan areas.
- There was no difference between youth from rural and metropolitan areas in their reported lifetime use of chewing tobacco, cigarettes, psychedelics, cocaine, inhalants, methamphetamine, club drugs, non-prescription steroids, or using a needle to administer illegal drugs.

Figure 11. Lifetime Substance Use: Rural Counties

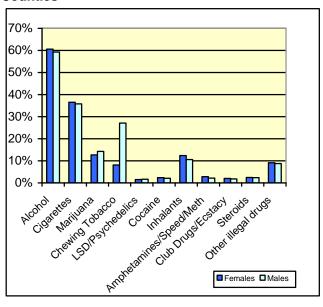
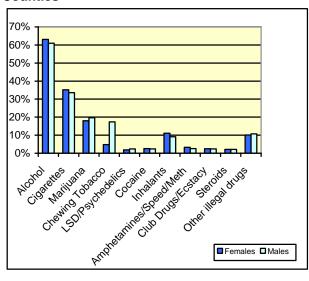


Figure 12. Lifetime Substance Uses: Urban Counties

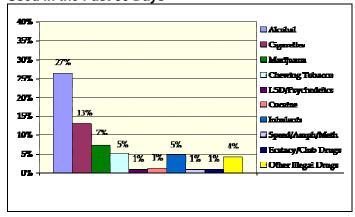


30-Day Substance Use

Students were asked to indicate the number of days, in the past 30 days, they had used cigarettes, alcohol and chewing tobacco. Additionally, they were asked to indicate the number of times in the past 30 days, they had used marijuana, LSD or other psychedelics, cocaine (powder, crack, or freebase), inhalants, speed, amphetamines or methamphetamines, ecstasy or other club drugs, or other illegal drugs. They were also asked how often they had consumed five drinks or more in the past two weeks, how often they had consumed alcohol on school property and whether they had ridden in an automobile with a driver who had been drinking, or driven while drinking.

 As can be expected, 30-day use rates were considerably lower than lifetime use rates. Relative differences between use of each drug, however, mirrored lifetime use. As was the case in 2004, alcohol use was by far the highest, followed by cigarettes and marijuana.

Figure 13. Percentage of Youth Who Had Used in the Past 30 Days



Alcohol

- Almost 30% (26.5%) of the students indicated they drank alcohol in the past 30 days.
- Drinking increased by age. Forty-three percent and 50% of 11th and 12th graders respectively, reported drinking alcohol one or more times in the past 30 days.
- Comparisons with the 2005 Monitoring the Future Study (MTF) results suggest that 30-day alcohol use among 8th, 10th, and 12th graders in Missouri is still somewhat higher than the national average.
- Comparisons with the 2005 National Survey on Drug Use and Health (NSDUH) data also suggest that 30-day alcohol use among 12-17 year old Missouri youth is higher than the national average.
- Patterns of drinking suggest that most youth, who do drink, do not do so on a daily basis. Only about 0.5% of youth across all grade levels reported drinking

alcohol on all 30 days in the past month. Of those who do drink, the majority report drinking 1 or 2 days out of the month.

- 11.8% of the students indicated they drank five or more drinks in a row within the past two weeks, and 4.2% indicated doing so three or more times.
- Males binge drink more than females. Among 10th graders, 18.1% of females and 21.0% of males reported binge drinking in the past two weeks. These percentages grew to 35.6% and 25.1% in 12th grade.
- Identical to 2004, a small percentage of students (2.5%), indicated they drank alcohol on school property within the past 30 days.

Passenger in Vehicle Driven by Someone Drinking

- 22.1% of the students indicated they were a passenger in a vehicle which was being driven by someone who was drinking alcohol.
- A higher percentage of females than males reported being a passenger in a vehicle which was being driven by someone who was drinking alcohol.
- Youth in metropolitan areas tended to ride with drivers who were drinking more often than youth in rural areas (22.5% versus 21.5%).
- 22.8% of rural females and 19.6% of rural males reported riding in a car with a driver who was drinking one time or more in the past 30 days. The rates were

somewhat lower for metropolitan females and males.

Figure 14. Rural and metropolitan Male and Female High-Schoolers Who Rode With a Driver Who Was Drinking in the Past 30 Days

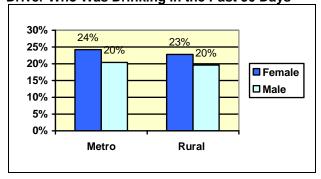
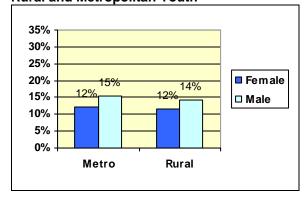


Figure 15. Male and Female Youth 16 and Over Who Reported Drinking While Driving: Rural and Metropolitan Youth



Driving While Drinking

- Around 14% of all youth of driving age (16 or more) said they had driven while drinking in the past 30 days.
- Males living in metropolitan areas were most likely to drink while driving, with 15.4% of males 16 and over reporting driving while drinking in the past 30 days.
- Females in rural areas were least likely to drink while driving (11.6%). This compares to 4.6% of all ages rural females.

30-Day Alcohol Use Patterns by County

The following map shows the distribution of the percentage of students who reported using alcohol in the past 30 days at the county level. Those counties in the "not reporting" category had 50 or fewer students participating in the survey.

Figure 16. Percentage of Students by County Who Reported the Use of Alcohol Within the Past 30 days



Cigarettes

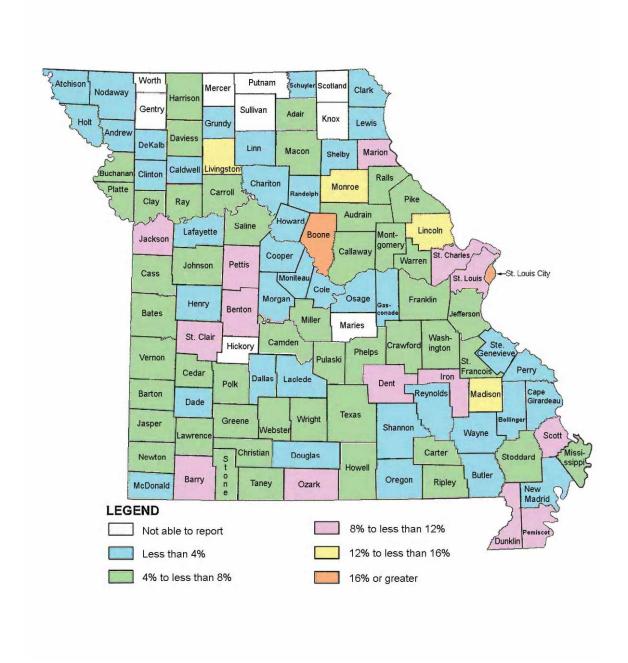
- As in 2004, cigarettes were the substance reported using second most frequently (alcohol use was the most frequent), with 13.0% of youth indicating that they had smoked cigarettes within the past 30 days.
- 30-day cigarette use steadily increased from 6th to 12th grade. 3.8% of 6th graders said they smoked cigarettes in the past 30 days, versus 28% of 12th graders.
- Of those who did smoke in the past 30 days, 78.5% smoked five or fewer cigarettes per day.
- Of those who did smoke in the past 30 days, 8.6% reported smoking eleven cigarettes or more daily.
- Compared to 2.8% in 2004, 3.4% of the students in the current sample indicated

- they had smoked cigarettes on school property within the past 30 days.
- Most youth (78.0%) indicated they have never tried to quit smoking.
- 30-day cigarette use was lowest among Asians, followed by African-Americans, Whites and then other ethnicities.

30-Day Cigarette Use Patterns by County

The following map shows the percentage of students who reported using cigarettes in the past 30 days at the county level. Those counties in the "not reporting" category had 50 or fewer students participating in the survey. Clearly, rates of cigarette use almost across all counties are lower than alcohol use.

Figure 17. Percentage of Students Who Reported Smoking Within the Past 30 Days by County



Marijuana

- Marijuana was the third most frequent drug of choice. Seven percent of the students indicated that they had smoked marijuana within the past 30 days.
- As was the trend in 2004, 30-day marijuana use consistently increased by grade, with almost 1% of 6th graders reporting 30-day use compared to 17.5% of 12th graders.
- Around two percent (1.7%) of the students indicated that they had smoked marijuana on school property in the past 30 days.
- 30-day marijuana use was lowest in southern Missouri, and highest in the Eastern region.

Chewing Tobacco

- As in 2004, chewing tobacco was the drug mentioned fourth most often, although only 5% of the students indicated they had used chewing tobacco within the past 30 days.
- Chewing tobacco use was higher in rural Missouri than metropolitan areas.
- Chewing tobacco was higher among males than females.
- Among 12th grade males living in rural Missouri, 11.5% reported using chewing tobacco in the past 30 days, with 3.4% reporting daily chewing tobacco use.

- Chewing tobacco use steadily increases by age.
- 3.1% of the students indicated they had used chewing tobacco on school property within the past 30 days. This was similar to what was reported in 2004

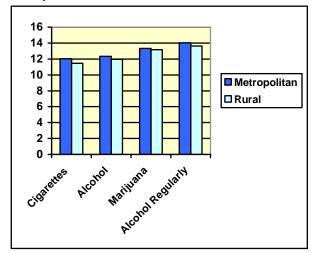
Age of Initiation

Students were asked to indicate how old they were when they first began smoking cigarettes (even just a puff), had at least one sip of alcohol, began drinking regularly (once or twice a month), and when they began smoking marijuana.

- Cigarette use began earlier than other substances, followed by alcohol (more than a sip), marijuana, and alcohol (regularly).
- Cigarette use begins at an average age of 11.79.
- The average age when youth reported having at least one sip of alcohol is 12.19.
- Regular drinking begins at an average age of 13. 83.
- Marijuana use begins at an average age of 13.23.
- For the three most frequently used substances, males used at an earlier age than females.
- Cigarette use for females began at an average age of 11.90 versus 11.60 for males.

- The average age when females reported having at least one sip of alcohol is 12.34, versus males at an average age of 11.94.
- Females report regular drinking at an average age of 13.86, versus males at 13.81.
- Marijuana use began at an average age of 13.41 for females versus 13.00 for males.
- For all substances, the average age of initiation was earlier in rural areas than it was in metropolitan areas (see Figure 19).

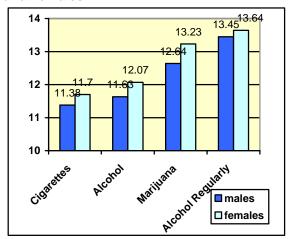
Figure 18. Average Age of Initiation of Substance Use for Students in Rural and Metropolitan Areas



When only 15 year-old youth were selected so as to be able to compare the current sample to the one reported on in 2004, as well as to compare to the earlier reported 2003 NSDUH data which had 15 year olds only, trends in age of initiation in general remain the same.

- Among 15 year-olds, youth reported beginning to use cigarettes, followed by alcohol (more than a sip), marijuana, and regular alcohol use.
- Cigarette use began at an average age of 11.56 (versus 11.48 in 2004), followed by alcohol (more than a sip) at the average age of 11.88, marijuana at the average age of 12.97 (versus 13.14 in 2004) and regular alcohol use at the average age of 13.56 (see Figure 20).
- Compared to the 2003 NSDUH data, 15 year-olds in the 2006 MSS sample started using alcohol and marijuana at a later age.

Figure 19. Average Age of Initiation for Substance Use in Missouri: 15-Year Old Males and Females

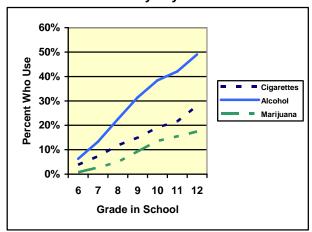


Patterns of Substance Use

 As shown in the Figure 21, alcohol use rises dramatically during the middle and high school years, with only 6.3% of sixth graders reporting past 30 day use, to 49.0% of all 12th graders reporting some past 30 day use (almost half).

- Though alcohol is used more than are cigarettes, cigarette use also rises from 6th to 12th grade, with 3.8% of 6th graders versus 28.0% of 12th graders reporting cigarette use in the past 30 days.
- 30-day marijuana use is lower than both alcohol and cigarette use, but does rise from 0.8% in the 6th grade to 17.5% in the 12th grade.

Figure 20. Percentage of Youth Who Have Used in the Past 30 Days by Grade in School



Comparisons with the National Data

Substance use in the 2006 MSS was compared to the national data using the 2005 Monitoring the Future Survey (MTF) Survey as well as to the 2005 National Survey on Drug Abuse and Health. It is important to note, however, that some of the differences observed in the following two sections may be attributable to differences in data collection methods across samples. The MTF is administered in-class to national samples, while the NSDUH study is based on in-home interviews using laptop computers. These methods differences lead to much higher absolute prevalence rates for MTF, although

the *trends* observed usually are very similar. There have been many methodological arguments over which study yields the most accurate findings.

Comparisons with the 2005 Monitoring the Future Survey (MTF)

Cigarette, alcohol and marijuana use were compared to national samples of youth who participated in the Monitoring the Future (MTF) survey in 2005. Only grades 8, 10 and 12 were selected and compared because MTF reports substance abuse for 8th, 10th and 12th graders only (even grades).

Figures 21 A/B/C. Comparisons of 30-Day Substance Use Patterns with 2005 MTF

Figure 21-A. Cigarettes

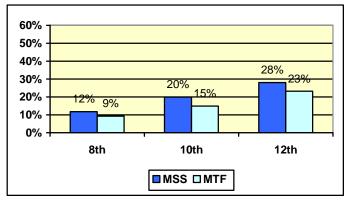


Figure 21-B. Alcohol

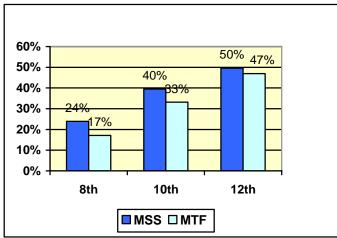
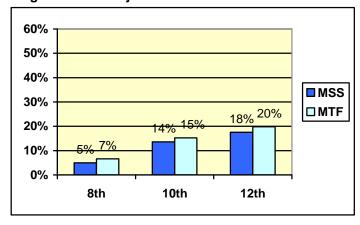


Figure 21-C. Marijuana



- Both 30-day cigarette and alcohol use across all three grades were slightly higher among the Missouri youth than they were nationally as reported by the MTF survey.
- 30-day marijuana use was slightly higher among the national sample.

Comparisons with the 2005 National Survey on Drug Abuse and Health (NSDUH) data

In order to be able to directly compare to the latest 2005 NSDUH data, 12-17 year olds only were selected from the 2006 MSS sample.

- In both samples, youth reported using the most alcohol, followed by cigarettes and then marijuana in the past 30 days.
- 30-day alcohol use was higher among the MSS youth than it was in the NSDUH sample (26.8% versus 16.5%). However, methodological differences in survey administration may account for much of this difference given that the MTF figures were similar to those in the MSS.
- 30-day cigarette use was slightly higher for the MSS youth than it was in the NSDUH sample (12.9% versus 10.8%).
- 30-day marijuana use was very slightly higher among the MSS youth than it was in the NSDUH sample (7.3% versus 6.8%).
- Lifetime alcohol and cigarette use were higher among the 12-17 year-old MSS youth than they were in the NSDUH sample.
- Lifetime marijuana use was higher among the 12-17 year-old NSDUH sample youth than they were in the MSS sample.

Figure 22. 30-day Substance Use: MSS and NSDUH Samples: 12-17 Year Olds

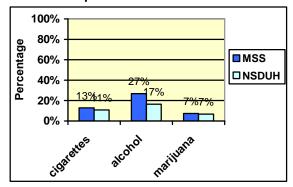
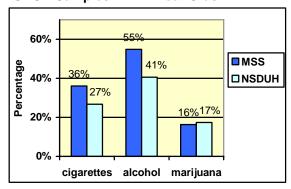


Figure 23. Lifetime Substance Use: MSS and NSDUH Samples: 12-17 Year Olds



Youth Risk and Protective Factors

Over the past 30 years, substantial evidence has been researched documenting the relationship between individual and environmental risk and protective factors and substance use. Youth with fewer risk factors and more protective factors are, on average, less likely to engage in deviant behaviors such as substance use.

Risk factors are those individual, family, school, community, and societal influences that can place a child at risk of engaging in substance use.

Protective factors are those positive characteristics or influences that can buffer young people from the potential for substance use. Listed below are some of the protective and risk factors that have been shown to be highly related to substance use. Youth behaviors are often influenced by a complex mix of these protective and risk factors.

Table 2. Risk and Protective Factors

What are Risk Factors?

Negative influences that *increased* the potential for substance use including:

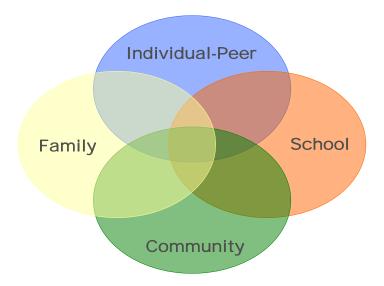
- Early initiation of substance use
- Favorable attitudes toward substance use
- Rebelliousness
- Antisocial attitudes
- Peer rewards for anti-social involvement
- Poor family management
- Parental approval of substance use
- Parental substance use
- Family conflict
- Lack of parent-child attachments and nurturing
- Academic failure
- Low commitment to school
- Neighborhood disorganization
- · Laws favorable to drug use
- Availability of drugs

What are Protective Factors?

Positive influences essential in building resilience in young people associated with **reduced** potential for substance use including:

- Strong social skills
- Negative attitudes toward substance use
- Family attachment
- Parental monitoring of children's activities with peers
- Clear rules of conduct that are consistently enforced within the family
- Involvement of parents in the lives of their children
- Success in school performance
- Strong bonds with institutions, such as school and religious organizations
- Adoption of conventional norms about substance use

Risk and Protective Factor Domains



Research has shown that many of the same factors apply to other behaviors such as youth violence, delinquency, and school dropout

Risk and protective factors are inter-related and organized into the four domains displayed above: Individual-Peer, Family, School, and Community. The MSS has a number of risk and protective factor scales constructed that measure these domains.

The relationship between these risk and protective factors with substance use, as well as differences in risk and protection according to certain demographic characteristics are examined. Except where noted, scales were calculated as the average of individuals' responses to questions in that scale. For each risk factor, the lower the

score the more it is reflective of "risk" (e.g., a harmful attitude or behavior). For each protective factor, the higher the score the more it is reflective of "resiliency" (e.g., a healthy attitude or behavior). Thus, a high score on either the Risk or Protective factors indicates a healthy response.]

The following commentary and illustrations demonstrate the extent of risk and resiliency for youth in Missouri, urban/rural classifications) as well as by gender, race/ethnicities, geographic region in Missouri, and grade levels.



Research indicates that youth who engage in antisocial behaviors (bullying, stealing, fighting, etc.), are rebellious, do not perceive drugs to be dangerous, and have friends who are also antisocial are more likely to engage in dangerous behaviors such as substance use.

Six Individual-Peer risk factors were measured, including youths' attitudes toward antisocial behavior (i.e., antisocial attitudes, rebelliousness), drug use (drug use attitudes, perceived risk of drug use – minor and major drugs), and their perception of their friends attitudes toward antisocial behavior and drugs (i.e., peer rewards for antisocial involvement). This section includes information on these antisocial behaviors and on suicide.

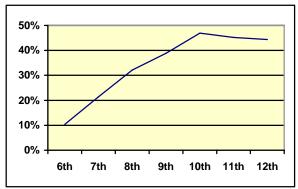
Rebelliousness: Cheating, Fighting, Ignoring Rules and Getting Away with Things

The Rebelliousness scale has five items that measure disregard for authority including items such as ignoring rules and thinking it is okay to lie or cheat. Youths' responses to individual items of interest and the scale as a whole are highlighted.

Risk and Protective Factors

- Rebelliousness
- Antisocial attitudes
- Antisocial and bullying behaviors
- Drug use attitudes
- Perceived risk of drug use (minor)
- Perceived risk of drug use (major)
- Peer rewards for antisocial involvement
- Suicide

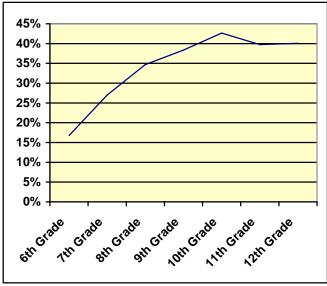
Figure 24. Youth Who Felt It Is Okay to Cheat in School by Grade in School



- By 10th grade, almost half of all youth surveyed thought it was okay to cheat in school.
- About as many (45.1%) reported that they thought it was all right to beat someone up if the other person started the fight.
- Fewer said they ignore rules that get in their way (20.4%) or do the opposite of what others tell them, just to get them mad (15.0%).
- Males were more rebellious than females.

• There was a steady increase in rebelliousness from 6th to 10th grade. Youth in the 10th and 11th grades reported similar levels of rebelliousness. However, by the 12th grade year youths' rebelliousness decreased to equal the level demonstrated by youth in the 9th grade.

Figure 25. Youth Who Said They'd Like to See How Much They Can Get Away With by Grade in School*



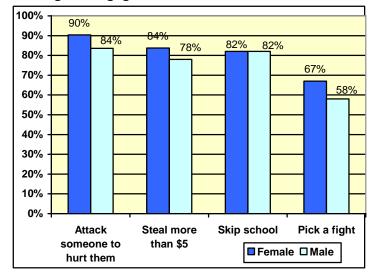
*"Very True" and "Somewhat True" Responses

• Youth in metropolitan areas were more rebellious than those in rural areas.

Antisocial Attitudes

The Antisocial Attitudes scale has four items that measure whether youth think it is wrong to engage in antisocial behaviors, such as stealing, fighting, and skipping school.

Figure 26. Percentage of Youth Who Felt It Was "Wrong" or "Very Wrong" for Someone Their Age to Engage in Behavior

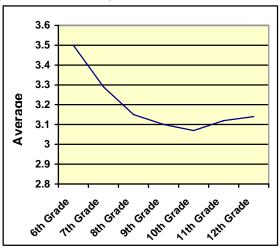


- Youth were least accepting of attacking someone with almost all reporting that it was "very wrong" or "wrong" and 61.4% reporting that this behavior is "very wrong." Fifty one and a half percent of youth identified skipping school as "very wrong". Stealing was considered to be "very wrong" by 43.1% of those surveyed. Youth were most accepting of picking a fight with someone with only 24.5% reporting that this behavior was "very wrong."
- Females were less accepting of antisocial behavior than were males.
- Youth tended to report that participating in antisocial behavior was less wrong as they got older. There was a steady increase in acceptance from the 6th through the 9th grades. Ninth, tenth, and eleventh graders did not differ in toward their attitudes antisocial behavior. However, 11th and 12th graders showed slight decreases in acceptance such youth in the 12th grade

showed similar attitudes toward those in the 8th grade.

- Youth in the Eastern region thought that participating in antisocial behavior was less wrong than youth in all other regions. Youth in the Southeast and Southwest regions were least accepting of antisocial behavior.
- Youth in rural areas were least accepting of antisocial behavior than those in metropolitan areas.

Figure 27. Antisocial Attitudes by Grade on a 0-4 scale (N=64,569) (higher score is more prosocial attitude)



Antisocial and Bullying Behaviors

In addition to the substance use behaviors discussed in the previous section, youth were also asked to report the frequency with which they themselves were engaged in several anti-social behaviors, including fighting, being arrested, being suspended from school, using a weapon to threaten someone, stealing or trying to steal a motor vehicle, or taking a gun to school.

- Almost half (48.1%) of youth reported being pushed and shoved by another.
- Slightly fewer (45%) of youth reported having seen another student with a weapon.
- 35.8% of youth reported having been in a physical fight.
- Low incidence behaviors included stealing a vehicle (3.4%), being drunk or high at school (2.6%) or bringing a gun to school (1.7%).

Physical Fighting

- Over 35% of youth reported having been in a physical fight within the past year. However, a larger percentage of youth (48.1%) reported than someone had pushed or shoved them within the past year. These behaviors were more prevalent among males than females.
- Youth in the 7th and 8th grades reported a higher number of physical fighting incidents than youth in any other grade. Incidents of physical fighting began to decline from the 9th through the 12th grade with 12th graders reporting the lowest number of incidents.
- Similarly, youth in the 6th, 7th, and 8th grades reported being pushed or shoved more often than youth in any other grades. These incidents then declined steadily from the 9th through the 12th grade such that 12th graders reported the lowest frequency of being pushed or shoved.

 Youth from metropolitan areas reported a higher number of physical fights than those from rural areas, whereas youth from rural areas reported being pushed or shoved at a higher frequency than those from metropolitan areas.

Drunk or High at School

- 2.6% of the youth surveyed reported that they had been drunk or high at school at least once within the past year.
- Males reported being drunk or high at school more often than females.
- Older youth reported being drunk or high at school more than younger youth. The number of reported incidents increased steadily through the 10th grade. Tenth, eleventh, and twelfth graders reported a similar frequency of being drunk or high at school.
- Youth from metropolitan areas reported being drunk or high at school more often than youth from rural areas.

Suspensions from School

- Over 17% of youth reported having been suspended from school at least once within the past year. Males reported a higher number of suspensions than females.
- White youth reported the lowest percentage of suspensions.
- Youth from metropolitan areas reported a higher frequency of suspensions than youth from rural areas.

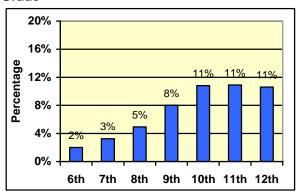
Stealing a Vehicle

- Only 3.4% of youth reported having stolen or tried to steal a vehicle in the past year.
- Males, African-American youth, and those living in metropolitan and the Eastern region of the state reported the highest percentage of vehicle theft.

Selling Illegal Drugs

- 6% of youth reported selling illegal drugs within the past year.
- Males, African-American youth, older youth, and those living in metropolitan areas and the Eastern region of the state reported the highest frequency of drug selling.

Figure 28. Reported Illegal Drug Selling by Grade



Weapon Use

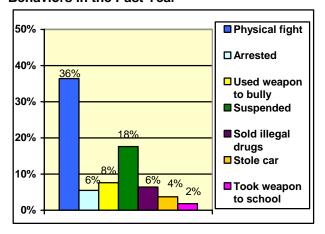
• Forty-five and half percent of the youth survey reported having seen another person with a weapon within the past year. Over 11% of these youth reported having been threatened with a weapon, whereas 7.3% reported using a weapon themselves to threaten another. Only 1.7% of youth reported taking a weapon to school.

- Males reported a higher frequency of all weapon related behaviors.
- Youth in the 6th and 7th grades reported the lowest frequency of witnessing another with a weapon. This frequency steadily increased such that 10th graders reported the highest frequency of seeing someone with a weapon. After the 10th grade the frequency began to decline.
- There was no difference between grade levels in the frequency of being threatened with a weapon.
- Youth in the Southeast region reported the highest frequency of seeing another with a weapon, followed by youth in the Northwest, Central, Southwest, and Eastern regions.
- Youth in the Southeast region reported a higher frequency of witnessing another with a weapon than youth from any other region.
- The reported incidents of being threatened by a weapon did not vary by region.

Arrests

- Only 5.1% of the youth surveyed reported having been arrested within the past year.
- Males, African-Americans, older youth, and youth in metropolitan areas, reported the greatest number of arrests.

Figure 29. Participation in Anti-Social Behaviors in the Past Year



Drug Use Attitudes

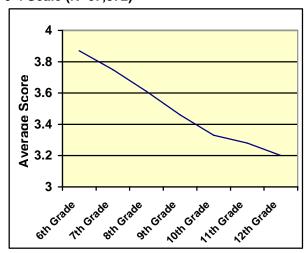
The Drug Use Attitudes scale has five items measuring the extent to which one thinks it is wrong to drink alcohol, smoke cigarettes or marijuana, or use other illicit drugs. A higher response indicates a "healthy" response.

- Youth were least accepting of using methamphetamine, club drugs, or other illegal drugs with almost 90% reporting the use of these drugs as "very wrong".
- Youth were most accepting of alcohol use, with only 53.8% reporting that drinking alcohol was "very wrong." Cigarettes were second most acceptable (60.4% "very wrong").
- Over 75% of youth identified the use of marijuana as "very wrong".
- Females were slightly less accepting of drug use than males.
- Youth in the Eastern region were the most accepting of drug use, followed by

youth in the Central, Southeast, Northwest, and Southwest regions.

- Youth residing in rural areas were slightly less accepting of drug use than those in metropolitan areas.
- Older youth were more accepting of drug use than younger youth.

Figure 30. Drug Use Attitudes by Grade on a 0-4 Scale (N=67.872)*



*Higher Score is Less Approving of Use

Perceived Risk of Drug Use

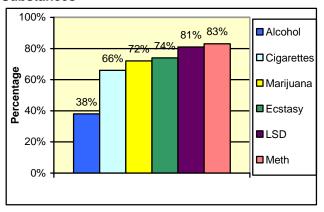
Two scales measured youths' perceptions of the extent to which they would risk harming themselves (physically or in other ways). The first scale measured the harm of cigarettes, alcohol, and marijuana (minor drugs); the second, the harm of cocaine, methamphetamine, psychedelic, and other illicit drugs (major drugs).

- Importantly, youth perceived regular marijuana use to be almost twice as risky as regular alcohol use.
- Use of methamphetamine, LSD, or cocaine occasionally were perceived to

be slightly more risky than marijuana use, with over 80% reporting their use a "great risk."

- 72.7% of youth thought that smoking marijuana regularly was a "great risk" compared to 66% who felt a pack of cigarettes a day was risky, and 38% who felt occasional marijuana smoking (1-2 times) or drinking daily posed a "great risk."
- Almost 75% of youth identified the occasional use of ecstasy as a "great risk."
- Youth were most accepting of the use of inhalants with only 58.6% reporting use a "great risk."

Figure 31. Perceived Risk of Regular Use of Substances*



- *Those who perceived that people put themselves at "great risk" by using cigarettes or alcohol daily, marijuana regularly, and ecstasy, LSD or meth occasionally.
- Females assigned greater risk to the use of minor and major drugs than did males.
- Whites perceived major drugs to be more risky than youth of other races.

- Youth in the Eastern region were the most accepting of minor drug use, followed by youth in the Central, Southeast, Northwest, and Southwest regions.
- Youth in the Southwest region perceived all drug use to be more risky than youth residing in any other region.
- Youth in rural areas thought using minor and major drugs was more risky than youth in metropolitan areas.

Peer Rewards for Antisocial Involvement

The Peer Rewards for Antisocial Involvement scale has four items measuring the extent to which one thinks they would be "seen as cool" if they smoked cigarettes or marijuana, drank alcohol, or carried a gun.

- Almost 80% of youth reported that if they carried a gun there was "very little" chance they would be seen as cool. Over 66% reported that there was "very little" chance they would be seen as cool if they smoked marijuana. Slightly over 63% of youth reported that there was "very little" chance they would be seen as cool if they smoked cigarettes. Youth thought they were most likely to be seen as cool if they started drinking regularly with only 52.7% reporting that there was "very little" chance they would be seen as cool by their peers if they drank alcohol.
- Males reported a greater likelihood of being perceived as cool by their peers if

- they performed these behaviors than females.
- Older youth reported a greater likelihood of being seen as cool by their peers if they used drugs or carried a gun than younger youth. There was an increase in perceptions of being seen as cool from the 6th through the 9th grade, at which point there was little change in perceptions through the 12th grade.
- Youth in metropolitan areas thought their peers would think the use of drugs and carrying a gun was "more cool" than those in rural areas.

Suicide

This year, four questions about suicide were asked of youth. Specifically, youth were asked whether they had seriously considered attempting suicide in the past 12 months, whether they had made a plan to attempt suicide, the number of times they had attempted suicide in the past 12 months, and, if they had attempted suicide, whether they had been treated by a doctor as a result of that attempt.

Considered Attempting Suicide

- Over 14% of youth reported that they had considered attempting suicide within the past year.
- A higher percentage of females (17.4%) reported having considered attempting suicide than males (10.2%).
- The percentage of youth who considered suicide was lowest in the 6th (8.1%), 7th (12.9%) and 12th grades (11.2%). The percentage increased

steadily from the 6th through the 8th grades. A similar percentage of youth in the 8th through the 11th grades reported considering suicide (range: 15.6% - 16.4%). This percentage then declined in the 12th grade.

 There was no variation between the percentage of youth from different regions or metropolitan/rural areas who considered suicide.

Made a Plan to Attempt Suicide

- Over 10% of youth reported that they had made a plan to attempt suicide within the past year.
- Almost twice as many females (12.5%) reported having made a plan to attempt suicide than males (7.6%).
- The percentage of youth who made a plan to attempt suicide was lowest in the 6th (5.6%), 7th (9.3%) and 12th grades (8.3%). The percentage increased steadily from the 6th through the 8th grades. A similar percentage of youth in the 8th through the 11th grades reported considering suicide (range: 11.1% 11.9%). This percentage then declined in the 12th grade.
- There was no variation between the percentages of youth from different regions who made a plan to attempt suicide.

Attempted Suicide

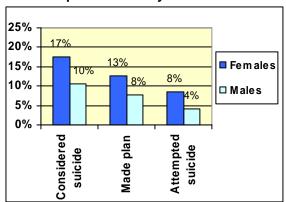
- Over 6% of youth reported actually having attempted suicide within the past year.
- Females reported having attempted suicide more frequently than males.

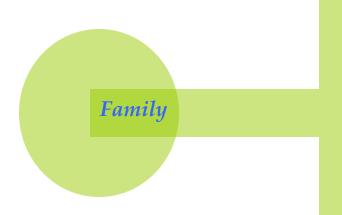
- The frequency of suicide attempts increased from the 6th through the 9th grades. Ninth, tenth, and eleventh graders reported the highest frequency of suicide attempts. By the 12th grade the number of suicide attempts declined to mirror the frequency of attempts reported by 6th and 7th graders.
- There was no variation in the reported frequency of suicide attempts by region or metropolitan/rural classification.

Treated by a Doctor as Result of a Suicide Attempt

- Of those who attempted suicide, 36% were treated by a doctor as a result of their attempt. There were no differences according to gender.
- The percentage of youth who were treated by a doctor for an attempted suicide increased from 24.2% in 6th grade to 41.1% in 12th grade. There was no variation between the percentage of youth from different regions who were treated by a doctor as a result of their suicide attempt.

Figure 32. Percentage of Youth Who Considered Suicide, Made Plans for Suicide, and Attempted Suicide by Gender





Risk Factors

- Family Management/Supervision
- Parental response to antisocial behavior
- Family conflict
- Family history of antisocial behavior
- Parental attitudes towards drugs
- Parental attitudes toward antisocial behavior

Protective Factors

- Opportunities for parental involvement
- · Rewards for parental involvement

Risk Factors

Family risk factors were assessed using five scales that measure attitudes and behaviors shown, through prior research, to be associated with negative behaviors among the youth. These measures focus on the extent of parents' responses and attitudes to antisocial behavior, drug use and the behavior occurring within the family:

- Parental response to antisocial behavior
- Parental attitudes toward antisocial behavior
- Parental attitudes towards drugs
- Family management/supervision
- Family conflict

Additionally, youth are asked to report on their family's history of antisocial behavior. Six items measured whether or not a student had any siblings who smoked cigarettes or marijuana, drank alcohol, taken a gun to school, been suspended or expelled from school, or had a family member who had a severe drug or alcohol problem.

Parental Response to Antisocial Behavior

The Parental Response to Antisocial Behavior scale consists of three items assessing students' perceptions of the likelihood of getting caught by their parents if one was to drink alcohol, carry a gun, or skip school (i.e. engage in antisocial behavior).

On a scale of 1 to 4, a higher response reflects more positive behaviors (a greater likelihood of being caught by parents in the above named antisocial behaviors.

The Parental Response to Antisocial Behavior trend remained similar to that found in 2004.

- Parents located in the Eastern region were less likely than parents in any other region to respond to antisocial behavior, and parents in the Southwest region were more likely to respond.
- Students perceived that their parents in metropolitan areas were *less* likely to

respond to antisocial behavior than those in rural areas.

 Parents of younger youth, rural parents, parents of White students, and parents of female students were more likely to react to negative behavior than their counterparts.

Parental Attitudes toward Antisocial Behavior

The Parental Attitudes toward Antisocial Behavior scale has three items that measure students' perception of how wrong their parents would think it would be to steal, draw graffiti, or fight.

The scale was measured on a 0 to 3 scale, where a higher response indicates students' perception of a higher parental disapproval.

The Parental Attitudes toward Antisocial Behavior trends remained almost identical to the one observed in 2004.

- Drawing graffiti or defacing buildings was the behavior youth perceived their parents to feel most negative towards., followed by stealing and then picking a fight with someone.
- Almost eighty-six percent (85.6%) of students surveyed felt their parents would think it was "very wrong" to draw graffiti, write things, or draw pictures on buildings and other property.
- Only 61.0% of students believed that their parents would think it was "very wrong" for them to pick a fight with someone.

- Almost eighty two percent (81.5%) of students felt their parents would think it was "very wrong" to steal something worth more than \$5.
- Females reported that their parents have a somewhat more negative attitude toward antisocial behavior than did the males.
- Though not by much, parents' disapproval of antisocial behavior seemed to decrease with age. As in 2004, parents of older youth were more approving of antisocial behaviors than parents of younger youth.
- Students' parents in metropolitan areas were more likely to approve of antisocial behaviors than those in rural areas.

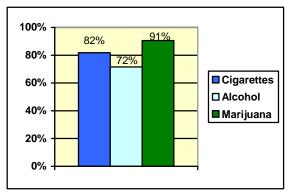
Parental Attitudes toward Drugs

The Parental Attitudes toward Drugs scale consists of three items measuring students' perception of how wrong their parents would think it would be to drink alcohol, and smoke cigarettes or marijuana.

This scale was measured on a 0 to 3 scale, where a higher response indicates students' perception of a higher parental disapproval of drug use.

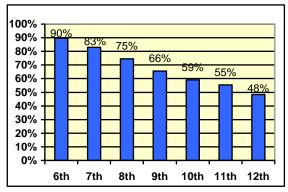
The Parental Attitudes toward Drugs trend remained similar to that found in 2004.

Figure 33. Youth Who Reported That Their Parents Would Feel It Was "Very Wrong" to Use



- Students' perceived their parents to be most disapproving of marijuana, followed by cigarette and then alcohol use (see Figure 34).
- There did not seem to be a big difference between females' and males' perception of their parents approval/disapproval of substance use.
- Students' parents in rural areas were more disapproving than parents in metropolitan areas; parents in the Northwest and Southwest regions were more disapproving than other parents.
- Latino students reported the highest parental disapproval towards drugs.
- Parents' approval of substance use drops dramatically as youth age. Twelfth grade parents are almost half as likely to disapprove than 6th grade parents (see Figure 35 for alcohol example).

Figure 34. Parents Would Think It Was "Very Wrong" to Drink by Grade



Family Management/Supervision

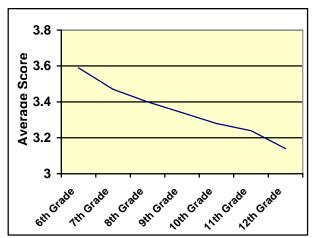
The Family Management/Supervision scale consists of six items that measure students' perceptions of rules, including about alcohol and drugs, within the family and parental knowledge of child activities.

On a scale 1 to 4, a higher response is considered a "healthy" response because it indicates a higher level of management/supervision in the family.

Family Management/Supervision trend remained similar to that found in 2004.

 Consistent with MSS 2004, high school students reported *lower* levels of family management and supervision than did middle school students (see Figure 36).

Figure 35. Family Management by Grade



- Females indicated a slightly higher level of family management and supervision than males.
- White youth reported the highest level of family management (3.40) when compared to other races. Asians had the next highest average score (3.26).
- Students' families in rural areas had *higher* levels of family management and supervision than those in metropolitan areas and this was also consistent with the trend in 2004.
- Students whose mothers and fathers had less education had lower family management scores.

Family Conflict

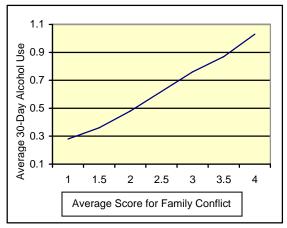
The Family Conflict scale consists of two items focusing on arguments that occur within the student's family.

Family Conflict was measured on a scale 1 to 4, where a higher score suggests a higher level of conflict in the family (i.e. lower score is better).

In general, the trend for Family Conflict is similar to that observed in 2004.

 Family conflict and student alcohol use were positively related. Students with higher family conflict were more likely to use alcohol in the past 30 days (see Figure 37).

Figure 36. Relationship between 30-Day Alcohol Use and Family Conflict*



*Higher scores indicate higher use and higher family conflict

- Unlike in MSS 2004 and though the difference was small, males reported lower levels of family conflict than females.
- Students in metropolitan areas reported higher levels of family conflict than those in rural areas.
- African American youth reported higher levels of family conflict than did other ethnic groups.
- Though the differences were small, as students' grade level increased, they reported higher levels of family conflict. Specifically, students' levels of family conflict increased from 6th through 9th grade, remained constant through 11th

grade and then slightly decreased in the 12th grade.

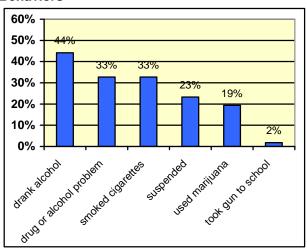
Family History of Antisocial Behavior

Six items measured Family History of Antisocial Behavior. These items measure whether or not a student had any siblings who smoked cigarettes or marijuana, drank alcohol, has taken a gun to school, gotten suspended or expelled from school, or had a family member who had a severe drug or alcohol problem.

- Among family members, alcohol use was the most pervasive negative behavior measured. Approximately forty-four percent of youth (44.2%) reported that a sibling drank beer, wine or hard liquor.
- One-third (32.7%) of youth reported that a sibling smoked cigarettes.
- One-third (32.7%) of youth reported that someone in their family had a severe alcohol or drug problem. Far fewer (19.4%) youth reported that a sibling had used marijuana.
- Approximately one-quarter (23.3%) of students reported that a sibling had been suspended or expelled from school.
- Very few youth (1.8%) reported that their siblings had taken a gun to school.
- Females were more likely to report having a family member with a severe drug or alcohol problem than males (35.8% versus 29.1%, respectively).

- More females reported having siblings that drank, used marijuana, and smoked cigarettes.
- As grade increased, so did youth reporting that their siblings drank, used marijuana and smoked cigarettes.
- Youth with family members with substance use problems were more likely to use substances.

Figure 37. Youth Who Reported Their Sibling or Family Member Having Engaged in Antisocial Behaviors



 Students from rural areas reported a higher number of their siblings who had drunk alcohol or been suspended.

Protective Factors

The Family Protective factors consisted of two scales:

- Opportunities for positive parental involvement
- Rewards for parental involvement

Opportunities for Parental Involvement

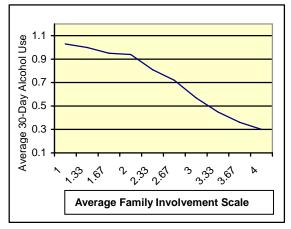
The first of these scales, Opportunities for Parental Involvement, consists of three items that measure the extent to which students are asked to be involved in making family decisions, the ability to ask parents for help, and the chance to do fun things with one's parents.

Opportunities for Parental Involvement was measured on a scale 1 to 4, where a higher score suggests a higher level of parental involvement (i.e. higher score is better).

Trend for Opportunities for Parental Involvement remained unchanged from the one observed in 2004.

- As grade increased, parental involvement decreased. Students in the 6th grade reported the highest parental involvement and this involvement steadily decreased through 10th grade and then remained constant through 12th grade.
- Students in metropolitan areas reported a lower parental involvement than did those in rural areas.
- Whites and Latinos reported the highest levels of parental involvement.
- There were not big differences among female and male students in terms of level of parental involvement.
- Youth with higher family involvement report less alcohol use (see Figure 39).

Figure 38. Relationship between 30-Day Alcohol Use and Family Involvement



*Higher score for family involvement indicates more family involvement. Higher score for alcohol use indicates greater alcohol use.

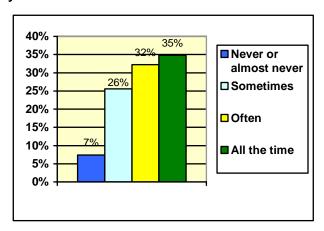
Rewards for Parental Involvement

The Rewards for Parental Involvement scale consists of two items that assess the extent to which students' parents notice when they are doing a good job, and tell them they are proud of them.

Rewards for Parental Involvement was measured on a scale 1 to 4, where a higher score suggests a higher level of reward for parental involvement.

As with Opportunities for Parental Involvement, Rewards for Parental Involvement trends observed remained unchanged from the one observed in 2004.

Figure 39. "How often do your parents tell you that they are proud of you for something you have done?"



• Students from the Central and Southwest regions reported more rewards for parental involvement than those from the other three regions.

- Females reported more rewards for parental involvement than males.
- Students in metropolitan areas reported fewer rewards for parental involvement than those in rural areas.
- Whites reported more rewards for parental involvement than did any other ethnic group.
- Rewards for parental involvement decreased as grade increased. Students in the 6th 9th grades reported more rewards for parental involvement than those in the 10th 12th grades.



School Risk and Protective Factors

- Academic performance
- Absenteeism
- School commitment
- Opportunities for school involvement
- Rewards for school involvement

The MSS explores several school-related risk and protective factors, including academic performance, absenteeism, school commitment, opportunities for school involvement, and rewards for school involvement. These measures have all been shown to enhance adolescent youth development and reduce and/or delay substance use and other negative behaviors.

Risk Factors

Risk factors included assessing students' absenteeism.

Absenteeism

Youth were asked how many days they had missed school due to illness, because they had skipped or cut, or for other reasons.

- 45.9% of youth reported missing one or more days due to illness. Females were slightly more likely to report being out of school due to illness than males.
- 13.8% of youth reported missing one or more days because they skipped or cut school. Females skipped fewer days than males.
- The higher the grade level, the greater the number of skipped days.

 Youth in metropolitan areas were more likely to skip school than youth in rural areas.

Protective Factors

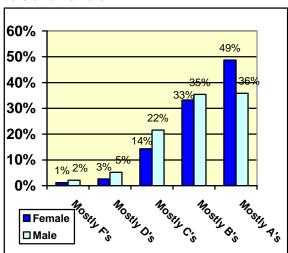
The School Protective factors consisted of:

- Academic Performance
- School Commitment
- Opportunities for school involvement
- Rewards for school involvement

Academic Performance

Youth were asked to assess their performance in school the previous year.

Figure 40. Self-Reported School Performance: Male and Female

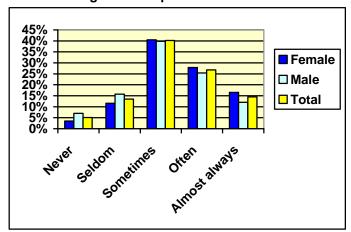


- Most youth reported receiving mostly "A's" or "B's".
- Females reported higher grades than males.
- Those with higher academic performance reported less alcohol use.

School Commitment

The School Commitment scale consists of four items focusing on the extent to which students enjoyed school, tried to do their best work, and felt that their school work was meaningful and important. A higher core indicated greater commitment.

Figure 41. "How often do you feel that school is meaningful and important?"



- A fairly low percentage of youth felt that school was "almost always" meaningful and important (14.5%).
- Females were more committed to school than males.
- School commitment was lower among high school youth than middle/junior high school youth.

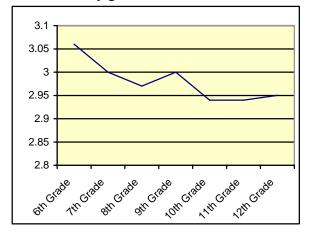
• Rural youth were more committed than metropolitan youth.

Opportunities for School Involvement

The Opportunities for School Involvement scale has five items that measure the extent to which students are asked to be involved in decisions made in the classroom, classroom projects, and school and classroom activities.

- Females indicated more opportunities for school involvement than males.
- 6th through 9th grade students reported more opportunities for school involvement than 10th – 12th graders.
- Opportunities for school involvement decreased with grade.

Figure 42. "Opportunities for school involvement by grade"



 Youth in the Eastern and Southeastern region indicated fewer opportunities for school involvement than students in other regions. • Students in the Northwest region indicated more opportunities for school involvement.

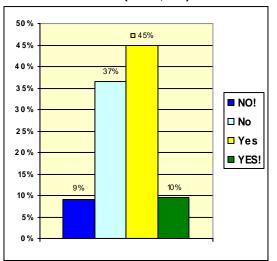
Rewards for School Involvement

The Rewards for School Involvement scale measures the extent to which students' teachers notice when they are doing a good job, and praise them when they are doing well.

- Rewards for school involvement were not very high. Only 10% of youth felt strongly that their teachers praised them when they were doing well.
- Females reported more rewards for school involvement than males.
- Rewards for school involvement steadily decreased from 6th through 9th grade and then remain steady in 9th through 12th grades.

 Rural students reported fewer rewards for school involvement than other students.

Figure 43. "My teachers praise me when I work hard in school" (N=67,844)





Risk Factors

- Drug use laws
- Drug availability
- Drug use norms
- Community disorganization
- Neighborhood attachment

Protective Factors

- Opportunities for community involvement
- · Rewards for community involvement

The MSS survey explores different aspects of the youths' communities, all of which have been shown to be associated with substance use. Five scales were administered that measure (1) drug use laws, (2) drug availability, (3) drug use norms, disorganization (4) community, and (5) the extent of students' attachment to their neighborhood. Protective factors examine opportunities and rewards for community involvement.

Risk Factors

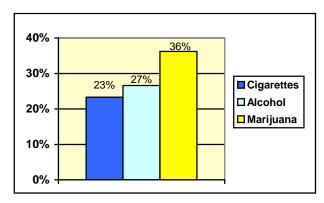
Drug Use Laws

The Drug Use Laws scale has three items that assess whether youth believe that if they smoke cigarettes or marijuana, or drink alcohol that they would get caught by the police.

 Over 36% of youth perceived that the police would catch them if they used marijuana. However, less than 30% of youth thought they would be caught if they drank alcohol or smoked cigarettes.

- Females were more likely than males to believe that youth who used cigarettes, marijuana or alcohol would get caught by police.
- African-American youth reported a greater likelihood of getting caught by the police than students of any other race/ethnicity.
- Older youth were less likely to think that they would be caught by the police than younger youth. There was a steady decrease from 6th though 10th grade. This perception remained steady from 10th through 12th grade.
- The students in the Southwest region believed they would be caught by the police for using drugs than youth in any other region.
- Students in metropolitan communities indicated less likelihood of getting caught by the police for using drugs than those in rural communities.

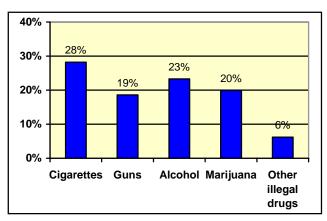
Figure 44. Youth Who Felt They Would Be Caught by Police for Substance Use



Drug Availability

Drug Availability has five items that measure the accessibility of obtaining cigarettes, alcohol, marijuana, other drugs, and guns.

Figure 45. Youth Who Reported Drugs Were "Very Easy" To Obtain



- Youth thought it was easiest to obtain cigarettes, followed by alcohol, marijuana, guns, and then cocaine, LSD, or meth.
- 45.4% thought it was "easy" or "very easy" to obtain cigarettes. Over 33% of youth identified obtain guns and marijuana as "easy" or "very easy" to

- do. Over 26% of youth thought obtaining alcohol was "easy" or "very easy" to do. Youth thought that obtaining cocaine, LSD, or meth was the least easy with only 17% reported that it was "easy" or "very easy" to do.
- Males indicated that drugs were easier to obtain than females.
- There was no variation between youth of different race/ethnicities in their perception of drug availability.
- There was a steady increase from the 6th through the 12th grade in the perception of ease of obtaining drugs.
- Youth in the Southwest region reported that drugs were harder to obtain than youth in other regions.
- There was no difference between metropolitan and rural area youth in their perception of drug availability.

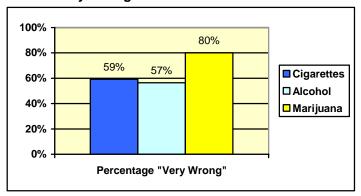
Drug Use Norms

Drug Use Norms, the third scale, has three items focusing on students' perception of the attitudes of the adults in their neighborhood toward cigarettes, marijuana, and alcohol.

• Youth perceived that adult neighbors were least accepting of smoking marijuana, with 80.3% reporting that they perceived their neighbors thought it was "very wrong" to do. Many students also perceived their neighbors to feel that drinking (56.6%) and cigarette smoking (59.8%) were "very wrong" to do.

- Males perceived that their neighbors were less accepting of substance use than females.
- Older youth perceived their adult neighbors to be more accepting of substance use than younger youth.
 There was a steady increase in the perception of neighbors' acceptance of substance use from 6th through 12th grade.
- Students in the Southwest region perceived their neighbors to be more accepting of substance use than youth from any other region.
- There was no difference in rural and metropolitan students' perception of their adult neighbors' acceptance of substance use.

Figure 46. Adult Neighbors' Perceptions of Substance Use: Percentage Who Felt It Was "Very Wrong"

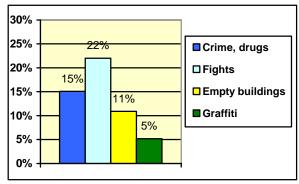


Community Disorganization

Community Disorganization has four items that assess the presence of crime (e.g., drug selling), fights, abandoned buildings, and graffiti in students' neighborhood.

- Fights (21.9%) in the neighborhood were reported most often, followed by crime and/or drug selling (14.9%) and the presence of abandoned buildings (10.9%). Graffiti was seen least often (5.2%).
- Females reported a higher presence of community disorganization than males.
- White youth reported less community disorganization than Latinos and African-Americans.
- There was a steady increase in the perception of community disorganization from 6th through 8th grade. Students in grades 9 through 11 highest amount reported the community disorganization. However, by the 12th grade year, students' perception of community disorganization decreased to equal the level perceived by students in the 8th grade.
- Perception of community disorganization was lowest in the Central and Southwest regions, and highest in the Southeast region.
- There were no differences between rural and metropolitan youth in perceptions of community organization.

Figure 47. Percentage of Students who Perceived Their Community to be Disorganized



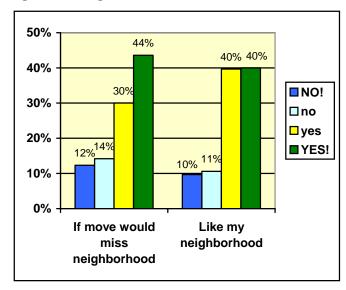
Neighborhood Attachment

Neighborhood Attachment, has two items measuring the extent to which students like the neighborhood in which they now live and whether they would miss it if they were to leave.

- The majority of youth reported that they liked their neighborhood (80.1%) and would miss it if they had to move (73.9%).
- Male students had a higher level of neighborhood attachment than Female students.
- White youth reported a higher amount of neighborhood attachment than any other race/ethnicity.
- The level of neighborhood attachment steadily decreased from 6th though 10th grade. Youth in the 10th through 12th grades reported similar levels of neighborhood attachment.
- There was no variation between youth from the different regions in their level of neighborhood attachment.

 Students in rural areas had higher levels of neighborhood attachment than those in metropolitan areas.

Figure 48. Neighborhood Attachment



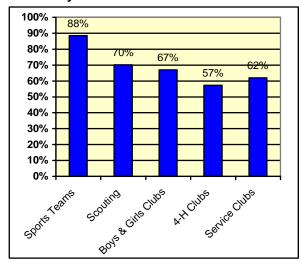
Protective Factors

There are two Community Protective scales measuring (1) the extent to which opportunities are provided for positive community involvement, and (2) rewards for that involvement.

Opportunities for Community Involvement

The Opportunities for Community Involvement scale has five items assessing the extent to which community activities, such as sports, scouting, boys and girls clubs, 4-H clubs, and service clubs are made available for students to join.

Figure 49. Percentage of Youth Reporting Availability of After-School Activities



- On the whole, after-school activities were accessible to youth. Sport teams were most accessible, with 88% of youth reported there were sports teams in their neighborhood.
- Over 70% of youth reported that there was scouting available to them in their neighborhood, and 67% of youth reported there were boys and girls clubs in their neighborhood.
- Over 57% of youth reported there were 4-H clubs in their neighborhood.
- Over 62% of youth reported that there were service clubs in their neighborhood.
- Males and females did not differ in their perception of the availability of sports teams or service clubs in their neighborhood.
- A higher percentage of females reported having scouting, boys and girls clubs, and 4-H clubs in their neighborhood than males.

- Youth of different race/ethnicities varied in their perception of the availability of sports teams, scouting, 4-H clubs, and service clubs in their neighborhood. A higher percentage of White youth reported the availability of sports teams than youth of any other races.
- A smaller percentage of youth in the Southwestern region reported availability of scouting in their neighborhood than youth in any other region.
- Youth in metropolitan and rural areas did not differ in their perception of the availability of sports teams and scouting in their neighborhood.

Rewards for Community Involvement

The Rewards for Community Involvement scale consists of four items that focus on the extent to which students' neighbors notice, are proud, and encourage them to do a good job, as well as are available to talk to them about important issues.

 Over 63% of youth reported that their neighbors encouraged them to do their best. Over 50% of youth reported that they talked to adult neighbors about important things, and that their neighbors are proud of them when they do something good. However, only 32% of youth reported that their neighbors recognize when they do a good job.

Figure 50. "There are people in my neighborhood, or the area where I live, who are proud of me when I do something well"

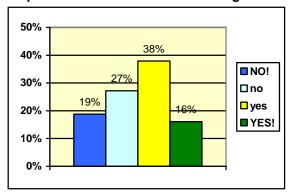
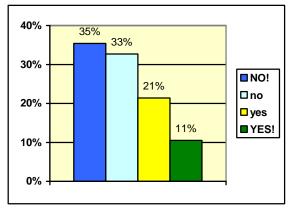


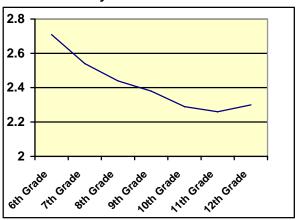
Figure 51. "My neighbors notice when I am doing a good job and let me know about it"



 Males and females perceived a similar level of rewards for community involvement.

- There was a steady decrease in the perception of rewards for community involvement in the 6th through 10th grade. Youth in 10th through 12th grade reported similar perceptions.
- Youth in rural Missouri perceived greater rewards for community involvement than youth in metropolitan areas.

Figure 52. Rewards for Community Involvement by Grade in School



Summary

This report has summarized the major findings from the online-administered 2006 Missouri Student Survey. Analyses have included descriptives of the sample, substance abuse (cigarette, alcohol, marijuana and other drugs) behaviors, and patterns of risk and protective factors for Missouri's teens. Major findings consideration are as follows:

Substance Use

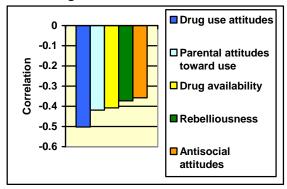
- Alcohol continues to be the most prevalent drug used by Missouri's youth. Youth are far more likely to consume alcohol than they are to smoke cigarettes, chewing tobacco, inhalants, and marijuana and other illegal drugs.
- Alcohol was perceived to be the least harmful drug among both youth and youth felt that their parents thought alcohol use was less wrong than cigarette or marijuana use.
- Alcohol and cigarette use was slightly higher than national averages; marijuana use was slightly lower.

Relationship of Risk and Protective Factors to Substance Use

The risk and protective factors described in this report have all been demonstrated to be strongly related to substance use. An analysis of the relationships between these factors and alcohol use for the MSS sample demonstrated the following:

- Drug Use Attitudes were most strongly related to alcohol use. Those youth who disapproved of use were more likely not to drink than those who approved of use.
- Perceived availability of drugs was also strongly related to alcohol use. If youth thought that alcohol was difficult to obtain, they were less likely to drink.
- Parents who disapproved of their children's use were more likely to have children who did not use themselves.
- *Rebellious* youth were more likely to drink, as were those with *antisocial* attitudes.

Figure 53. Relationships of Risk and Protective Factors to 30-day Alcohol Use: Five Strongest Factors



A large correlation coefficient indicates a strong relationship between alcohol use and the risk or protective factor

 These relationships also applied for 30day cigarette use, binge drinking, and marijuana use.

Suicide

While the number of suicide-related behaviors and thoughts has decreased from 2004 to 2006 among the youth sampled, the numbers still remain somewhat high. 14.3% considered suicide; 10.4% made a suicide plan, and 6.5% actually attempted suicide.

 Suicide ideation was higher among females than males, and highest for youth in 9th grade.

Relationship of Risk and Protective Factors to Suicide

Of the variables measured, family factors were most closely related to suicide. Opportunities for parental involvement, family conflict, and rewards for parental involvement, were all related to suicidal thinking. Drug use attitudes were most strongly related to suicidal thoughts in the

last 12 months. Youth who were more accepting of drug use were more likely to have considered committing suicide.

Conclusions and Policy Implications

Analysis of the 2006 Missouri Student Survey reveals a variety of policy considerations related to adolescent substance use and related factors.

- Considering the prevalence of alcohol use among adolescents, policy makers and prevention practitioners should continue to focus on preventing and reducing **alcohol use**. Alcohol is a problem substance in the home, is available to youth, is not perceived to be as harmful as marijuana or other illegal drugs, and is more accepted in the home and community.
- Parental attitudes are strongly related to adolescent substance use and suicide ideation. Prevention programming should focus on family education and skills-building as a means of affecting substance use and suicidal patterns in youth. Parents should be informed of their influence and given tools to better communicate with their children.
- Policies that focus on reducing cigarette and alcohol availability in the home and the community and restricting youth access to alcohol (parental monitoring of adolescent alcohol use, for example) are recommended.
- Students who are connected to school, feel their teachers care about them, and who do well in school are less likely to

- use. Because males tend to use more than females and be less connected to school, schools should be particularly attuned to the needs of males and focus on strengthening their connectedness to school.
- Schools should tailor prevention programming to whether the school is located in a rural or metropolitan environment.
- Families and schools should be more cognizant of the potential for suicide among Missouri's youth, particularly among females.
- Police should improve their ability to enforce existing cigarette, gun, and alcohol laws. A large number of youth perceive cigarette, guns and alcohol to be easy to obtain.

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2006 Missouri Student Survey Questionnaire

1.	How old a	e you?							
	O 10	0 11	O 12	O 13	O 14				
	O 15	O 16	0 17	O 18	O 19 or old	ler			
2.	What grad	e are you in?							
	O 6th	○ 7th	O 8th	O 9th	O 10th	O 11th	O 12th		
3.	Are you:	O Female	O Male						
4a.	Are you Hi	spanic or Latir	no? O \	res ON	lo				
4b.	O White O Asian		O Black o	or African Am an Indian or	,				
4c.	What is the language you use most often at home?								
	O Englis	sh O	Spanish	O Oth	ier				
5.	How much education does your father have?								
	O He did	d not finish Hig	h School	O He graduated from High School					
	O He ha	d some educa ure	tion after H	igh School	O He grad	uated from Co	llege		
6.	How much	education do	es your mot						
	O She d	id not finish Hi	gh School	O She graduated from High School					
	O She h	ad some educ	ation after I	O She graduated from College					
	O Not S	ure							

7.	O Mostly F O Mostly G O Mostly G	F's C	ow were you Mostly D's Mostly B's	J	ast year?				
8.	b. How m	nany whole nany whole	days have y	ou misseo	d because y	ou skipped	4-5 or cut?	6-10	11 or more
9.	In my school		nave lots of	chances to	help decid	le things like	e class ac	tivities and r	ules.
10.	Teachers as		rk on classro	oom projed	ets.				
11.	My teacher(s	,	hen I am do	oing a good	d job and le	ts me know	about it.		
12.	There are a activities o	utside of cla		nts in my :	school to ge	et involved in	n sports,	clubs, and o	ther school
13.	There are lo		es for studer	nts in my s	chool to tal	k with a tead	cher one-	on-one.	
14.	The school le		nts know wl	hen I have	done some	ething well.			
15.	My teachers No Ye	•	when I work	hard in so	hool.				
16.	Are your sch	•	better than	the grades	of most st	udents in yo	ur class?		
17.	I have lots of		be part of o	class discu	ussions or a	ctivities.			
18.	How often do	o you feel th O Se		ol work yo O Somet	_	ned is mean	•	d important? O Almost Al	

19.	How in	nteresting are m	ost of your course	es to you?	ou?					
	ΟV	ery interesting a	and stimulating	O Slightly dull	O Slightly dull					
	O Q	uite interesting		O Very dull						
	O F	airly interesting								
20.	How important do you think the thing you are learning in school are going to be for you later in life?									
	ΟV	ery important		O Slightly impo	rtant					
	0 Q	uite important		O Not at all imp	ortant					
	O F	airly important								
21.	Now th	ninking back over	er the past year in	school, how often die	d you:					
	a.	enjoy being ir	school?							
		O Never	O Seldom	O Sometimes	O Often	O Almost always				
	b.	hate being in	school?							
		O Never	O Seldom	O Sometimes	O Often	O Almost always				
	C.	try to do your	best work at scho	ool?						
		O Never	O Seldom	O Sometimes	O Often	O Almost always				
PEE	R INFLI	UENCES								
22.			act friands (tha fri	ands vou faal closest	to) In the past w	ear (12 months), how many				
ZZ .		our best friends		1 2	3 4	sar (12 months), now many				
	•	smoked cigar		1 2	3 4					
	b.	•		for example, vodka, v	vhisky or ain) wh	en their parents did not				
	δ.	tried Beer, wine or hard liquor (for example, vodka, whisky, or gin) when their parents did not know about it?								
	C.									
	d. used LSD, Cocaine, amphetamines, or other illegal drugs?									
	e.	been suspended from school?								
	f.	•	carried a gun (other than for hunting or sport)?							
	g. sold illegal drugs?									
	h.	stolen or try to	o steal a motor ve	hicle such as a car or	motorcycle?					
	i.	been arrested	! ?							
	j.	been member	rs of a gang?							

23.	How old were you when you first:									
	Never have 8 or Younger 9 10 11 12 13 14 15 16 17 18 or older									
	a. smoked marijuana?									
b. smoked a cigarette even just a puff?										
	c. had more than a sip or two of beer, wine, or hard liquor (for example, vodka, whiskey, or gin)?									
	d. began drinking alcoholic beverages regularly, that is, at least once or twice a month?									
	e. got suspended from school									
	f. got arrested									
	g. carried a gun									
	h. belonged to a gang									
	i. attacked someone with the serious idea of hurting them									
24.	How wrong do you think it is for someone your age to:									
	O Very wrong O Wrong O A little bit wrong O Not wrong at all									
	a. steal anything worth more than \$5.00?									
	b. pick a fight with someone?									
	c. attack someone with the idea of seriously hurting them?									
	d. stay away from school all day when their parents think they are at school?									
	e. drink beer, wine, or hard liquor (for example, vodka, whiskey, or gin) regularly?									
	f. smoke cigarettes									
	g. smoke marijuana?									
	h. use LSD, cocaine, amphetamines, or another illegal drug?									
	i. use methamphetamine, club drugs, or ecstasy?									
25.	I ignore rules that get in my way.									
	No Yes									
26.	It is all right to beat up people if they start the fight.									
	No Yes									
27.	It is important to be honest with your parents, even if they become upset or you get punished.									
	Very false Somewhat false Somewhat true Very true									
28.	I do the opposite of what people tell me, just to get them mad.									
	No Yes									
29.	I think it is okay to take something without asking if you can get away with it.									
	No Yes									

30. How many times have you done the following things:

Once a week or more 2 or 3 times a month

About once a month Less than once a month

I've done it, but not in the past year Never

- a. done what feels good no matter what?
- b. done something dangerous because someone dared you to do it?
- c. done crazy things even if they are a little dangerous?
- 31. How many times in the past year (the last 12 months) have you:

Response options:

1-2 times 3-5 times 6-9 times

10-19 times 20-29 times 30-39 times 40 or more times

- a. been arrested?
- b. been in a physical fight?
- c. used any weapon to threaten or bully someone?
- d. been pushed, shoved, slapped, hit, or kicked by someone who wasn't just kidding around?
- e. been threatened or injured with a weapon, such as a gun, knife, or club?
- f. seen someone carrying a gun, knife or other weapon?
- g. been suspended from school?
- h. sold illegal drugs?
- i. stolen or tried to steal a motor vehicle such as a car or a motorcycle?
- j. been drunk or high at school?
- k. taken a gun to school?
- 32. What are the chances you would be seen as cool if you:

Response options:

Very good chance Pretty good chance

Some chance Little chance None or very little chance

- a. smoked cigarettes?
- b. began drinking alcoholic beverages regularly, that is, at least once or twice a month?
- c. smoked marijuana?
- d. carried a gun (other than for hunting or sport)?
- 33. I think sometimes it is okay to cheat at school.

No Yes

34.	I like to see how much	I can get away with
O¬.	I like to see hew indon	i dani got avvay viit

O Very false O Somewhat false O Somewhat true O Very true

35. How much do you think people risk harming themselves (physically or in other ways) if they:

No Risk Slight Risk Moderate Risk Great Risk

- a. smoke one or more packs of cigarettes per day?
- b. try marijuana once or twice?
- c. smoke marijuana regularly?
- d. take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day?
- e. use ecstasy occasionally (more than once or twice)?
- f. use meth (methamphetamine) occasionally (more than once or twice)?
- g. use LSD or other psychedelic drugs occasionally (more than once or twice)?

DRUG/ALCOHOL USAGE

36. Have you ever used chewing tobacco, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?

Never Once or twice

Once in a while but not regularly Regularly in the past

Regularly now

37. During the past 30 days, on how many days did you use chewing tobacco, such as Redman, Levi

Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?

0 days 1 or 2 days 3 to 5 days

6 to 9 days 10 to 19 days 20 to 29 days All 30 days

38. During the past 30 days, on how many days did you use chewing tobacco, such as Redman, Levi

Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen, on school property?

0 days 1 or 2 days 3 to 5 days

6 to 9 days 10 to 19 days 20 to 29 days All 30 days

39. Have you ever smoked cigarettes?

Never Once or twice

Once in a while but not regularly Regularly in the past

Regularly now

40. During the past 30 days, on how many days did you smoke cigarettes?

0 days 1 or 2 days 3 to 5 days

6 to 9 days 10 to 19 days 20 to 29 days All 30 days

41. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

I did not smoke cigarettes during the past 30 days

Less than 1 cigarette per day 1 cigarette per day

2 to 5 cigarettes per day 6 to 10 cigarettes per day

11 to 20 cigarettes per day

More than 20 cigarettes per day

42. During the past 30 days, on how many days did you smoke cigarettes on school property?

0 days 1 or 2 days 3 to 5 days

6 to 9 days 10 to 19 days 20 to 29 days All 30 days

43. Have you ever tried to quit smoking cigarettes?

No Yes

44. During your life, how many times have you had at least one drink of alcohol?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

45. During your life, on how many days have you had at least one drink of alcohol?

0 days 1 or 2 days 3 to 9 days

10 to 19 days 20 to 39 days 40 to 99 days 100 or more days

46. During the past 30 days, how many times have you had at least one drink of alcohol?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

47. During the past 30 days, on how many days did you have at least one drink of alcohol?

0 days 1 or 2 days 3 to 5 days

6 to 9 days 10 to 19 days 20 to 29 days All 30 days

48. Think back over the last two weeks. How many times have you had five or more alcoholic drinks in a

row?

None Once Twice 3-5 times 6-9 times 10 or more times

49. During the past 30 days, on how many days did you have at least one drink of alcohol on school

property?

0 days 1 or 2 days 3 to 5 days

6 to 9 days 10 to 19 days 20 to 29 days All 30 days

50. During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol? 0 times 1 time 2 or 3 times 4 or 5 times 6 or more times 51. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol? 0 times 1 time 2 or 3 times 4 or 5 times 6 or more times 52. How many times (if any) have you used marijuana in your lifetime? 0 times 1-2 times 3-5 times 6-9 times 10-19 times 20-39 times 40 or more times 53. How many times (if any) have you used marijuana during the past 30 days? 0 times 1-2 times 3-5 times 6-9 times 10-19 times 20-39 times 40 or more times 54. During the past 30 days, how many times did you use marijuana on school property? 0 times 1-2 times 3-5 times 6-9 times 10-19 times 20-39 times 40 or more times 55. How many times (if any) have you used LSD or other psychedelics in your lifetime? 0 times 1-2 times 3-5 times 6-9 times 10-19 times 20-39 times 40 or more times 56. How many times (if any) have your used LSD or other psychedelics during the past 30 days? 0 times 1-2 times 3-5 times 40 or more times 6-9 times 10-19 times 20-39 times 57. How many times have you used crack or freebase forms of cocaine in your lifetime? 0 times 1-2 times 3-5 times 10-19 times 20-39 times 6-9 times 40 or more times 58. How many times did you use any form of cocaine, including powder, crack, or freebase during the past 30 days? 0 times 1-2 times 3-5 times 6-9 times 10-19 times 20-39 times 40 or more times 59. How many times (if any) have you sniffed glue, breathed the contents of an aerosol spray can, or inhaled other gases or sprays in order to get high in your lifetime? 0 times 1-2 times 3-5 times 6-9 times 10-19 times 20-39 times 40 or more times

60. How many times (if any) have you sniffed glue, breathed the contents of an aerosol spray can, or inhaled other gases or sprays in order to get high during the past 30 days?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

61. How many times (if any) have you taken speed, amphetamines, or meth in your lifetime?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

62. How many times (if any) have you taken speed, amphetamines, or meth during the past 30 days?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

63. How many times (f any) have you used derbisol in your lifetime?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

64. How many times (if any) have you used derbisol during the past 30 days?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

65. How many times (if any) have you used ecstasy or other club drugs (e.g., GHB, Rohypnol, ketamine) in

your lifetime?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

66. How many times (if any) have you used ecstasy or other club drugs (e.g., GHB, Rohypnol, ketamine)

during the past 30 days?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

67. How many times (if any) have you taken steroid pills or shots, without a doctor's prescription in your

lifetime?

0 times 1-2 times 3-5 times

6-9 times 10-19 times 20-39 times 40 or more times

68. How many times (f any) have you used other illegal drugs in your lifetime?

0 times 1 or 2 times 3 to 9 times

10 to 19 times 20 to 39 times 40 or more times

69. How many times (if any) have you used other illegal drugs during the past 30 days? 1 or 2 times 0 times 3 to 9 times 10 to 19 times 20 to 39 times 40 or more times 70. How many times have you used a needle to inject any illegal drug into your body in your lifetime? 0 times 2 or more times 1 time **COMMUNITY-BASED PERCEPTIONS** 71. If you wanted to get some beer, wine, or hard liquor (for example, vodka, whiskey, or gin), how easy would it be for you to get some? Very hard Sort of hard Sort of easy Very easy 72. If you wanted to get some cigarettes, how easy would it be for you to get some? Very hard Sort of hard Sort of easy Very easy 73. If a kid smoked marijuana in your neighborhood, or the area around where you live, would he or she be caught by the police? No Yes 74. If you wanted to get drugs like cocaine, LSD, or amphetamines, how easy would it be for you to get some? Sort of hard Very hard Sort of easy Very easy 75. If a kid drank some beer, wine, or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood, or the area around where you live, would he or she be caught by the police? No Yes 76. If you wanted to get a gun, how easy would it be for you to get one? Very hard Sort of hard Sort of easy Very easy 77. If you wanted to get some marijuana, how easy would it be for you to get some? Sort of hard Very hard Sort of easy Very easy 78. If a kid smoked cigarettes in your neighborhood, or the area around where you live, would he or she be

caught by the police?

Yes

No

79.

	kids your age:
	O Very wrong O Wrong O A little bit wrong O Not wrong at all
	a. to use marijuana?
	b. to drink alcohol?
	c. to smoke cigarettes?
80.	About how many adults have you known personally who in the past year have:
	None 1 adult 2 adults 3 or 4 adults 5 or more adults
	a. used marijuana, crack, cocaine, or other drugs?
	b. sold or dealt drugs?
	c. done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.?
	d. gotten drunk or high?
0.4	
81.	If I had to move, I would miss the neighborhood I now live in. No Yes
82.	My neighbors notice when I am doing a good job and let me know about it. No Yes
83.	I like my neighborhood, or the area around where I live.
03.	No Yes
0.4	
84.	There are a lot of adults in my neighborhood I could talk to about something important. No Yes
85.	How much do each of the following statements describe your neighborhood, or the area around where
	you live? No Yes
	a. crime and/or drug selling
	b. fights
	c. lots of empty or abandoned buildings
	d. lots of graffiti
86.	People move in and out of my neighborhood a lot.
	No Yes
87.	There are people in my neighborhood, or the area around where I live, who are proud of me when I do
	something well.
	No Yes

How wrong would most adults in your neighborhood, or the area around where you live, think it is for

88.	Whic	h of the following activities	for people	your age are available in your community?
	a.	sports teams	Yes	No
	b.	scouting	Yes	No
	c.	boys and girls clubs	Yes	No
	d.	4-H clubs	Yes	No
	e.	service clubs	Yes	No
89.	Have	you changed schools in th	ne past yea	ar (the last 12 months)? No Yes
	No	Yes		
90.	There best.	e are people in my neighbo	orhood, or	the area around where I live, who encourage me to do my
	No	Yes		
T		UESTISMS ASK ABOUT	VOUD 54	
THE N	EXIG	UESTIONS ASK ABOUT	YOUR FA	MILY.
For the	follo	wing questions, if you co	nsider m	ore than one person your "father" or "mother" (e.g., a
step pa	arent (or foster parent), please a	answer th	ese questions of the father or mother you currently live
with M	OST o	of the time.		
91.	How	wrong do your parents fee	l it would b	pe for you to:
	0 '	Very wrong O Wrong	O A litt	le bit wrong O Not wrong at all
	a.	drink beer, wine, or hard I	iquor (for e	example, vodka, whiskey, or gin) regularly (at least once or
		twice a month)?		
	b.	smoke cigarettes?		
	c.	smoke marijuana?		
	d.	steal anything worth more	than \$5.0	00?
	e.	draw graffiti, write things, permission)?	or draw pi	ctures on buildings or other property (without the owner's
	f.	pick a fight with someone	?	
92.	Have	any of your brothers or sis	sters ever:	
	a.	•		example, vodka, whiskey, or gin)?
	b.	smoked marijuana?	1 (-	3 ,
	c.	smoked cigarettes?		
	d.	taken a gun to school?		
	e.	been suspended or expel	led from so	chool?
93.	The r	ules in my family are clear		
	No			

94.

	No	Yes								
95.	When I a	am not at home, one o Yes	m not at home, one of my parents knows where I am and who I am with. Yes							
96.	We argu No	gue about the same things in my family over and over. Yes								
97.	My pare No	nts want me to call if I Yes	s want me to call if I am going to be late getting home. Yes							
98.	•	ank some beer, wine, on, would you be cauç Yes		mple, vodka, whisk	cey, or gin) without your pa	arents				
99.	My family has clear rules about alcohol and drug use. No Yes									
100.	If you carried a gun without your parents' permission, would you be caught by your parents? No Yes									
101.	If you sk No	ipped school without y Yes	our parents' permissio	on, would you be c	aught by your parents?					
102.		nts notice when I am o	doing a good job and le Sometimes	et me know about i Often	t. All the time					
103.	My pare No	nts ask me what I thinl Yes	k before most family d	ecisions affecting r	me are made.					
104.		en do your parents tell or almost never	you that they are prou	nd of you for somet Often	hing you have done? All the time					
105.	If I had a	a personal problem, I c Yes	could ask my mom or c	lad for help.						
106.	My pare No	nts give me lots of cha Yes	ances to do fun things	with them.						
107.	My pare No	nts ask if I have gotter Yes	n my homework done.							
108.	People i No	n my family have seric Yes	ous arguments.							

Has anyone in your family ever had a severe alcohol or drug problem?

109. Would your parents know if you did not come home on time?

No Yes

110. During the past 30 days, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?

0 days 1 day 2 or 3 days 4 or 5 days 6 or more days

111. During the past 12 months, did you ever seriously consider attempting suicide?

No Yes

112. During the past 12 months, did you make a plan about how you would attempt suicide?

No Yes

113. During the past 12 months, how many times did you actually attempt suicide?

0 times 1 time 2 or 3 times 4 or 5 times 6 or more times

114. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

I did not attempt suicide during the past 12 months

Yes

No

115. How important were these questions?

Not too important Fairly important Important Very important

116. How honest were you in filling out this survey?

I was very honest I was honest pretty much of the time

I was honest some of the time I was honest once in a while

I was not honest at all

******DESE: AGE OF INITIATION

CATEGORIES

8 years old or younger 10 years old 11 or 12 years old 13 or 14 years 15 or 16 years old 17 years old or older

QUESTIONS:

- 20. How old were you when you smoked a whole cigarette for the first time?
- 24. How old were you when you first started smoking cigarettes regularly (at least one cigarette every day for 30 days)?
- 27. How old were you when you had your first drink of alcohol other than a few sips?
- 31. How old were you when you tried marijuana for the first time?
- 34. How old were you when you tried any form of cocaine, including powder, crack, or freebase, for the first time?

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